SEQUENCE LISTING

<110> Chemtob, Sylvain
       Martin, Beauchamp
       Quiniou, Christiane

<120> Cytokine receptors modulators, method of identifying same, and
       method of modulating cytokine receptors activity with same

<130> GOUD:040US

<140> 10/693,657
<141> 2003-10-24

<150> 60/420,679
<151> 2002-10-24

<150> 60/423,530
<151> 2002-11-05

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<170> PatentIn version 3.2

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Gly Val Leu Ile Ile Ile Glu Leu Asn Thr Lys Glu Gln Ala
1   5   10

<210> 2
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       Peptide

<400> 2

Glu Ala Thr Val Gly Glu Arg Val Arg Leu
1   5   10

<210> 3
<211> 10
<212> PRT

<213> Artificial Sequence

<220>
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      Peptide

<400> 3

Leu Pro Leu Glu Ser Asn His Thr Leu Lys
1   5   10

<210> 4
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      Peptide .

<400> 4

Ser Pro Val Asp Ser Tyr Gln Tyr Gly Thr Thr
1   5   10

<210> 5
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      Peptide

<400> 5

Val Ile Leu Thr Asn Pro Ile Ser Lys Glu
1   5   10

<210> 6
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      Peptide

<400> 6

Asn Lys Val Gly Arg Gly Glu Arg Val Ile
1   5   10

```
<210>  7
<211>  9
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Description of Artificial Sequence:  Synthetic
       Peptide

<400>  7

Met Pro Pro Thr Glu Gln Glu Ser Val
1               5


<210>  8
<211>  9
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Description of Artificial Sequence:  Synthetic
       Peptide

<400>  8

Arg Lys Thr Lys Lys Arg His Cys Val
1               5


<210>  9
<211>  9
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Description of Artificial Sequence:  Synthetic
       Peptide

<400>  9

Thr Val Leu Glu Arg Val Ala Pro Thr
1               5


<210>  10
<211>  9
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Description of Artificial Sequence:  Synthetic
       Peptide

<400>  10

Thr Ser Ile Gly Glu Ser Ile Glu Val
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<210> 11
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
       Peptide

<400> 11

Ser Ile Phe Val Pro Arg Pro Glu Arg Lys
1   5   10

<210> 12
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
       Peptide

<400> 12

Asn Phe Leu His Asn Ser Ile Phe Val
1   5

<210> 13
<211> 9
<212> PRT
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
       Peptide
<400> 13

Glu Gly Pro Cys Pro Lys Val Cys Glu
1   5

<210> 14
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
       Peptide

<400> 14

Glu Ser Asp Val Leu His Phe Thr Ser Thr
1   5   10

<210> 15
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
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      Peptide

<400> 15

Arg Thr Asn Ala Ser Val Pro Ser Ile
1   5

<210> 16
<211> 9
<212> PRT
<213> Artificial Sequence

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      Peptide
<400> 16

Ile Arg Lys Tyr Ala Asp Gly Thr Ile
1   5

<210> 17
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      Peptide

<400> 17

Glu Asn Phe Ile His Leu Ile Ile Ala
1   5

<210> 18
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      Peptide

<400> 18

Ala Lys Thr Gly Tyr Glu Asn Phe Ile His
1   5   10

<210> 19
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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      Peptide

<400> 19

Lys Glu Arg Thr Val Ile Ser Asn Leu Arg
1   5   10

<210> 20
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<213> Homo sapiens

<400> 20

Met Gln Ser Lys Val Leu Leu Ala Val Ala Leu Trp Leu Cys Val Glu
1   5   10   15

Thr Arg Ala Ala Ser Val Gly Leu Pro Ser Val Ser Leu Asp Leu Pro
            20   25   30

Arg Leu Ser Ile Gln Lys Asp Ile Leu Thr Ile Lys Ala Asn Thr Thr
            35   40   45

Leu Gln Ile Thr Cys Arg Gly Gln Arg Asp Leu Asp Trp Leu Trp Pro
    50   55   60

Asn Asn Gln Ser Gly Ser Glu Gln Arg Val Glu Val Thr Glu Cys Ser
65   70   75   80

Asp Gly Leu Phe Cys Lys Thr Leu Thr Ile Pro Lys Val Ile Gly Asn
                85   90   95

Asp Thr Gly Ala Tyr Lys Cys Phe Tyr Arg Glu Thr Asp Leu Ala Ser
                100   105   110

Val Ile Tyr Val Tyr Val Gln Asp Tyr Arg Ser Pro Phe Ile Ala Ser
        115   120   125

Val Ser Asp Gln His Gly Val Val Tyr Ile Thr Glu Asn Lys Asn Lys
        130   135   140

Thr Val Val Ile Pro Cys Leu Gly Ser Ile Ser Asn Leu Asn Val Ser
145   150   155   160

Leu Cys Ala Arg Tyr Pro Glu Lys Arg Phe Val Pro Asp Gly Asn Arg
                165   170   175

Ile Ser Trp Asp Ser Lys Lys Gly Phe Thr Ile Pro Ser Tyr Met Ile
            180   185   190

Ser Tyr Ala Gly Met Val Phe Cys Glu Ala Lys Ile Asn Asp Glu Ser
        195   200   205

Tyr Gln Ser Ile Met Tyr Ile Val Val Val Val Gly Tyr Arg Ile Tyr
    210   215   220

Asp Val Val Leu Ser Pro Ser His Gly Ile Glu Leu Ser Val Gly Glu
225   230   235   240

Lys Leu Val Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val Gly Ile
                245   250   255

Asp Phe Asn Trp Glu Tyr Pro Ser Ser Lys His Gln His Lys Lys Leu
            260   265   270

Val Asn Arg Asp Leu Lys Thr Gln Ser Gly Ser Glu Met Lys Lys Phe
        275   280   285

Leu Ser Thr Leu Thr Ile Asp Gly Val Thr Arg Ser Asp Gln Gly Leu
    290   295   300

Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met Thr Lys Lys Asn Ser Thr
305   310   315   320

Phe Val Arg Val His Glu Lys Pro Phe Val Ala Phe Gly Ser Gly Met
                325   330   335

Glu Ser Leu Val Glu Ala Thr Val Gly Glu Arg Val Arg Ile Pro Ala

```
                    340                     345                     350


      Lys Tyr Leu Gly Tyr Pro Pro Pro Glu Ile Lys Trp Tyr Lys Asn Gly
              355             360             365


      Ile Pro Leu Glu Ser Asn His Thr Ile Lys Ala Gly His Val Leu Thr
              370             375             380


      Ile Met Glu Val Ser Glu Arg Asp Thr Gly Asn Tyr Thr Val Ile Leu
      385             390             395             400


      Thr Asn Pro Ile Ser Lys Glu Lys Gln Ser His Val Val Ser Leu Val
                      405             410             415


      Val Tyr Val Pro Pro Gln Ile Gly Glu Lys Ser Leu Ile Ser Pro Val
                  420             425             430


      Asp Ser Tyr Gln Tyr Gly Thr Thr Gln Thr Leu Thr Cys Thr Val Tyr
                  435             440             445


      Ala Ile Pro Pro Pro His His Ile His Trp Tyr Trp Gln Leu Glu Glu
              450             455             460


      Glu Cys Ala Asn Glu Pro Ser Gln Ala Val Ser Val Thr Asn Pro Tyr
      465             470             475             480


      Pro Cys Glu Glu Trp Arg Ser Val Glu Asp Phe Gln Gly Gly Asn Lys
                      485             490             495


      Ile Glu Val Asn Lys Asn Gln Phe Ala Leu Ile Glu Gly Lys Asn Lys
                  500             505             510


      Thr Val Ser Thr Leu Val Ile Gln Ala Ala Asn Val Ser Ala Leu Tyr
                  515             520             525


      Lys Cys Glu Ala Val Asn Lys Val Gly Arg Gly Glu Arg Val Ile Ser
              530             535             540


      Phe His Val Thr Arg Gly Pro Glu Ile Thr Leu Gln Pro Asp Met Gln
      545             550             555             560


      Pro Thr Glu Gln Glu Ser Val Ser Leu Trp Cys Thr Ala Asp Arg Ser
                  565             570             575
```

```
Thr Phe Glu Asn Leu Thr Trp Tyr Lys Leu Gly Pro Gln Pro Leu Pro
        580             585             590

Ile His Val Gly Glu Leu Pro Thr Pro Val Cys Lys Asn Leu Asp Thr
        595             600             605

Leu Trp Lys Leu Asn Ala Thr Met Phe Ser Asn Ser Thr Asn Asp Ile
    610             615             620

Leu Ile Met Glu Leu Lys Asn Ala Ser Leu Gln Asp Gln Gly Asp Tyr
625             630             635             640

Val Cys Leu Ala Gln Asp Arg Lys Thr Lys Lys Arg His Cys Val Val
            645             650             655

Arg Gln Leu Thr Val Leu Glu Arg Val Ala Pro Thr Ile Thr Gly Asn
        660             665             670

Leu Glu Asn Gln Thr Thr Ser Ile Gly Glu Ser Ile Glu Val Ser Cys
        675             680             685

Thr Ala Ser Gly Asn Pro Pro Pro Gln Ile Met Trp Phe Lys Asp Asn
    690             695             700

Glu Thr Leu Val Glu Asp Ser Gly Ile Val Leu Lys Asp Gly Asn Arg
705             710             715             720

Asn Leu Thr Ile Arg Arg Val Arg Lys Glu Asp Glu Gly Leu Tyr Thr
            725             730             735

Cys Gln Ala Cys Ser Val Leu Gly Cys Ala Lys Val Glu Ala Phe Phe
            740             745             750

Ile Ile Glu Gly Ala Gln Glu Lys Thr Asn Leu Glu Ile Ile Ile Leu
        755             760             765

Val Gly Thr Ala Val Ile Ala Met Phe Phe Trp Leu Leu Leu Val Ile
        770             775             780

Ile Leu Arg Thr Val Lys Arg Ala Asn Gly Gly Glu Leu Lys Thr Gly
785             790             795             800
```

```
Tyr Leu Ser Ile Val Met Asp Pro Asp Glu Leu Pro Leu Asp Glu His
            805             810             815

Cys Glu Arg Leu Pro Tyr Asp Ala Ser Lys Trp Glu Phe Pro Arg Asp
            820             825             830

Arg Leu Lys Leu Gly Lys Pro Leu Gly Arg Gly Ala Phe Gly Gln Val
            835             840             845

Ile Glu Ala Asp Ala Phe Gly Ile Asp Lys Thr Ala Thr Cys Arg Thr
    850             855             860

Val Ala Val Lys Met Leu Lys Glu Gly Ala Thr His Ser Glu His Arg
865             870             875             880

Ala Leu Met Ser Glu Leu Lys Ile Leu Ile His Ile Gly His His Leu
            885             890             895

Asn Val Val Asn Leu Leu Gly Ala Cys Thr Lys Pro Gly Gly Pro Leu
            900             905             910

Met Val Ile Val Glu Phe Cys Lys Phe Gly Asn Leu Ser Thr Tyr Leu
            915             920             925

Arg Ser Lys Arg Asn Glu Phe Val Pro Tyr Lys Thr Lys Gly Ala Arg
    930             935             940

Phe Arg Gln Gly Lys Asp Tyr Val Gly Ala Ile Pro Val Asp Leu Lys
945             950             955             960

Arg Arg Leu Asp Ser Ile Thr Ser Ser Gln Ser Ser Ala Ser Ser Gly
            965             970             975

Phe Val Glu Glu Lys Ser Leu Ser Asp Val Glu Glu Glu Glu Ala Pro
            980             985             990

Glu Asp Leu Tyr Lys Asp Phe Leu  Thr Leu Glu His Leu  Ile Cys Tyr
            995             1000            1005

Ser Phe  Gln Val Ala Lys Gly  Met Glu Phe Leu Ala  Ser Arg Lys
     1010            1015            1020
```

```
Cys Ile  His Arg Asp Leu Ala  Ala Arg Asn Ile Leu  Leu Ser Glu
    1025             1030             1035

Lys Asn  Val Val Lys Ile Cys  Asp Phe Gly Leu Ala  Arg Asp Ile
    1040             1045             1050

Tyr Lys  Asp Pro Asp Tyr Val  Arg Lys Gly Asp Ala  Arg Leu Pro
    1055             1060             1065

Leu Lys  Trp Met Ala Pro Glu  Thr Ile Phe Asp Arg  Val Tyr Thr
    1070             1075             1080

Ile Gln  Ser Asp Val Trp Ser  Phe Gly Val Leu Leu  Trp Glu Ile
    1085             1090             1095

Phe Ser  Leu Gly Ala Ser Pro  Tyr Pro Gly Val Lys  Ile Asp Glu
    1100             1105             1110

Glu Phe  Cys Arg Arg Leu Lys  Glu Gly Thr Arg Met  Arg Ala Pro
    1115             1120             1125

Asp Tyr  Thr Thr Pro Glu Met  Tyr Gln Thr Met Leu  Asp Cys Trp
    1130             1135             1140

His Gly  Glu Pro Ser Gln Arg  Pro Thr Phe Ser Glu  Leu Val Glu
    1145             1150             1155

His Leu  Gly Asn Leu Leu Gln  Ala Asn Ala Gln Gln  Asp Gly Lys
    1160             1165             1170

Asp Tyr  Ile Val Leu Pro Ile  Ser Glu Thr Leu Ser  Met Glu Glu
    1175             1180             1185

Asp Ser  Gly Leu Ser Leu Pro  Thr Ser Pro Val Ser  Cys Met Glu
    1190             1195             1200

Glu Glu  Glu Val Cys Asp Pro  Lys Phe His Tyr Asp  Asn Thr Ala
    1205             1210             1215

Gly Ile  Ser Gln Tyr Leu Gln  Asn Ser Lys Arg Lys  Ser Arg Pro
    1220             1225             1230

Val Ser  Val Lys Thr Phe Glu  Asp Ile Pro Leu Glu  Glu Pro Glu
```

```
              1235                    1240                    1245

Val Lys  Val Ile Pro Asp Asp  Asn Gln Thr Asp Ser  Gly Met Val
     1250                    1255                    1260


Leu Ala  Ser Glu Glu Leu Lys  Thr Leu Glu Asp Arg  Thr Lys Leu
     1265                    1270                    1275


Ser Pro  Ser Phe Gly Gly Met  Val Pro Ser Lys Ser  Arg Glu Ser
     1280                    1285                    1290


Val Ala  Ser Glu Gly Ser Asn  Gln Thr Ser Gly Tyr  Gln Ser Gly
     1295                    1300                    1305


Tyr His  Ser Asp Asp Thr Asp  Thr Thr Val Tyr Ser  Ser Glu Glu
     1310                    1315                    1320


Ala Glu  Leu Leu Lys Leu Ile  Glu Ile Gly Val Gln  Thr Gly Ser
     1325                    1330                    1335


Thr Ala  Gln Ile Leu Gln Pro  Asp Ser Gly Thr Thr  Leu Ser Ser
     1340                    1345                    1350


Pro Pro  Val
     1355


<210>  21
<211>  569
<212>  PRT
<213>  Homo sapiens

<400>  21

Met Lys Val Leu Leu Arg Leu Ile Cys Phe Ile Ala Leu Leu Ile Ser
1               5                   10                  15


Ser Leu Glu Ala Asp Lys Cys Lys Glu Arg Glu Glu Lys Ile Ile Leu
             20                  25                  30


Val Ser Ser Ala Asn Glu Ile Asp Val Arg Pro Cys Pro Leu Asn Pro
         35                  40                  45


Asn Glu His Lys Gly Thr Ile Thr Trp Tyr Lys Asp Asp Ser Lys Thr
     50                  55                  60
```

```
Pro Val Ser Thr Glu Gln Ala Ser Arg Ile His Gln His Lys Glu Lys
65              70              75              80


Leu Trp Phe Val Pro Ala Lys Val Glu Asp Ser Gly His Tyr Tyr Cys
              85              90              95


Val Val Arg Asn Ser Ser Tyr Cys Leu Arg Ile Lys Ile Ser Ala Lys
          100             105             110


Phe Val Glu Asn Glu Pro Asn Leu Cys Tyr Asn Ala Gln Ala Ile Phe
          115             120             125


Lys Gln Lys Leu Pro Val Ala Gly Asp Gly Gly Leu Val Cys Pro Tyr
      130             135             140


Met Glu Phe Phe Lys Asn Glu Asn Asn Glu Leu Pro Lys Leu Gln Trp
145             150             155             160


Tyr Lys Asp Cys Lys Pro Leu Leu Leu Asp Asn Ile His Phe Ser Gly
              165             170             175


Val Lys Asp Arg Leu Ile Val Met Asn Val Ala Glu Lys His Arg Gly
          180             185             190


Asn Tyr Thr Cys His Ala Ser Tyr Thr Tyr Leu Gly Lys Gln Tyr Pro
          195             200             205


Ile Thr Arg Val Ile Glu Phe Ile Thr Leu Glu Glu Asn Lys Pro Thr
      210             215             220


Arg Pro Val Ile Val Ser Pro Ala Asn Glu Thr Met Glu Val Asp Leu
225             230             235             240


Gly Ser Gln Ile Gln Leu Ile Cys Asn Val Thr Gly Gln Leu Ser Asp
              245             250             255


Ile Ala Tyr Trp Lys Trp Asn Gly Ser Val Ile Asp Glu Asp Asp Pro
              260             265             270


Val Leu Gly Glu Asp Tyr Tyr Ser Val Glu Asn Pro Ala Asn Lys Arg
          275             280             285
```

```
Arg Ser Thr Leu Ile Thr Val Leu Asn Ile Ser Glu Ile Glu Ser Arg
    290             295             300

Phe Tyr Lys His Pro Phe Thr Cys Phe Ala Lys Asn Thr His Gly Ile
305             310             315                 320

Asp Ala Ala Tyr Ile Gln Leu Ile Tyr Pro Val Thr Asn Phe Gln Lys
            325             330                 335

His Met Ile Gly Ile Cys Val Thr Leu Thr Val Ile Ile Val Cys Ser
            340             345                 350

Val Phe Ile Tyr Lys Ile Phe Lys Ile Asp Ile Val Leu Trp Tyr Arg
            355             360                 365

Asp Ser Cys Tyr Asp Phe Leu Pro Ile Lys Ala Ser Asp Gly Lys Thr
    370             375             380

Tyr Asp Ala Tyr Ile Leu Tyr Pro Lys Thr Val Gly Glu Gly Ser Thr
385             390             395                 400

Ser Asp Cys Asp Ile Phe Val Phe Lys Val Leu Pro Glu Val Leu Glu
            405             410             415

Lys Gln Cys Gly Tyr Lys Leu Phe Ile Tyr Gly Arg Asp Asp Tyr Val
            420             425             430

Gly Glu Asp Ile Val Glu Val Ile Asn Glu Asn Val Lys Lys Ser Arg
            435             440             445

Arg Leu Ile Ile Ile Leu Val Arg Glu Thr Ser Gly Phe Ser Trp Leu
    450             455             460

Gly Gly Ser Ser Glu Glu Gln Ile Ala Met Tyr Asn Ala Leu Val Gln
465             470             475             480

Asp Gly Ile Lys Val Val Leu Leu Glu Leu Glu Lys Ile Gln Asp Tyr
            485             490             495

Glu Lys Met Pro Glu Ser Ile Lys Phe Ile Lys Gln Lys His Gly Ala
            500             505             510

Ile Arg Trp Ser Gly Asp Phe Thr Gln Gly Pro Gln Ser Ala Lys Thr
```

Arg Phe Trp Lys Asn Val Arg Tyr His Met Pro Val Gln Arg Arg Ser
    530   535   540

Pro Ser Ser Lys His Gln Leu Leu Ser Pro Ala Thr Lys Glu Lys Leu
545   550   555   560

Gln Arg Glu Ala His Val Pro Leu Gly
                565

<210> 22
<211> 570
<212> PRT
<213> Homo sapiens

<400> 22

Met Thr Leu Leu Trp Cys Val Val Ser Leu Tyr Phe Tyr Gly Ile Leu
1   5   10   15

Gln Ser Asp Ala Ser Glu Arg Cys Asp Asp Trp Gly Leu Asp Thr Met
            20   25   30

Arg Gln Ile Gln Val Phe Glu Asp Glu Pro Ala Arg Ile Lys Cys Pro
        35   40   45

Leu Phe Glu His Phe Leu Lys Phe Asn Tyr Ser Thr Ala His Ser Ala
    50   55   60

Gly Leu Thr Leu Ile Trp Tyr Trp Thr Arg Gln Asp Arg Asp Leu Glu
65   70   75   80

Glu Pro Ile Asn Phe Arg Leu Pro Glu Asn Arg Ile Ser Lys Glu Lys
                85   90   95

Asp Val Leu Trp Phe Arg Pro Thr Leu Leu Asn Asp Thr Gly Asn Tyr
                100   105   110

Thr Cys Met Leu Arg Asn Thr Thr Tyr Cys Ser Lys Val Ala Phe Pro
            115   120   125

Leu Glu Val Val Gln Lys Asp Ser Cys Phe Asn Ser Pro Met Lys Leu
    130   135   140

```
Pro Val His Lys Leu Tyr Ile Glu Tyr Gly Ile Gln Arg Ile Thr Cys
145             150             155             160

Pro Asn Val Asp Gly Tyr Phe Pro Ser Ser Val Lys Pro Thr Ile Thr
                165             170             175

Trp Tyr Met Gly Cys Tyr Lys Ile Gln Asn Phe Asn Asn Val Ile Pro
                180             185             190

Glu Gly Met Asn Leu Ser Phe Leu Ile Ala Leu Ile Ser Asn Asn Gly
                195             200             205

Asn Tyr Thr Cys Val Val Thr Tyr Pro Glu Asn Gly Arg Thr Phe His
    210             215             220

Leu Thr Arg Thr Leu Thr Val Lys Val Val Gly Ser Pro Lys Asn Ala
225             230             235             240

Val Pro Pro Val Ile His Ser Pro Asn Asp His Val Val Tyr Glu Lys
                245             250             255

Glu Pro Gly Glu Glu Leu Leu Ile Pro Cys Thr Val Tyr Phe Ser Phe
                260             265             270

Leu Met Asp Ser Arg Asn Glu Val Trp Trp Thr Ile Asp Gly Lys Lys
                275             280             285

Pro Asp Asp Ile Thr Ile Asp Val Thr Ile Asn Glu Ser Ile Ser His
    290             295             300

Ser Arg Thr Glu Asp Glu Thr Arg Thr Gln Ile Leu Ser Ile Lys Lys
305             310             315             320

Val Thr Ser Glu Asp Leu Lys Arg Ser Tyr Val Cys His Ala Arg Ser
                325             330             335

Ala Lys Gly Glu Val Ala Lys Ala Ala Lys Val Lys Gln Lys Val Pro
                340             345             350

Ala Pro Arg Tyr Thr Val Glu Leu Ala Cys Gly Phe Gly Ala Thr Val
                355             360             365
```

```
Leu Leu Val Val Ile Leu Ile Val Val Tyr His Val Tyr Trp Leu Glu
    370             375             380

Met Val Leu Phe Tyr Arg Ala His Phe Gly Thr Asp Glu Thr Ile Leu
385             390             395             400

Asp Gly Lys Glu Tyr Asp Ile Tyr Val Ser Tyr Ala Arg Asn Ala Glu
                405             410             415

Glu Glu Glu Phe Val Leu Leu Thr Leu Arg Gly Val Leu Glu Asn Glu
            420             425             430

Phe Gly Tyr Lys Leu Cys Ile Phe Asp Arg Asp Ser Leu Pro Gly Gly
            435             440             445

Ile Val Thr Asp Glu Thr Leu Ser Phe Ile Gln Lys Ser Arg Arg Leu
    450             455             460

Leu Val Val Leu Ser Pro Asn Tyr Val Leu Gln Gly Thr Gln Ala Leu
465             470             475             480

Leu Glu Leu Lys Ala Gly Leu Glu Asn Met Ala Ser Arg Gly Asn Ile
            485             490             495

Asn Val Ile Leu Val Gln Tyr Lys Ala Val Lys Glu Thr Lys Val Lys
            500             505             510

Glu Leu Lys Arg Ala Lys Thr Val Leu Thr Val Ile Lys Trp Lys Gly
        515             520             525

Glu Lys Ser Lys Tyr Pro Gln Gly Arg Phe Trp Lys Gln Leu Gln Val
    530             535             540

Ala Met Pro Val Lys Lys Ser Pro Arg Arg Ser Ser Ser Asp Glu Gln
545             550             555             560

Gly Leu Ser Tyr Ser Ser Leu Lys Asn Val
            565             570


<210>  23
<211>  1367
<212>  PRT
<213>  Homo sapiens
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<400> 23

Met Lys Ser Gly Ser Gly Gly Gly Ser Pro Thr Ser Leu Trp Gly Leu
1   5   10   15

Leu Phe Leu Ser Ala Ala Leu Ser Leu Trp Pro Thr Ser Gly Glu Ile
            20   25   30

Cys Gly Pro Gly Ile Asp Ile Arg Asn Asp Tyr Gln Gln Leu Lys Arg
            35   40   45

Leu Glu Asn Cys Thr Val Ile Glu Gly Tyr Leu His Ile Leu Leu Ile
    50   55   60

Ser Lys Ala Glu Asp Tyr Arg Ser Tyr Arg Phe Pro Lys Leu Thr Val
65   70   75   80

Ile Thr Glu Tyr Leu Leu Leu Phe Arg Val Ala Gly Leu Glu Ser Leu
                85   90   95

Gly Asp Leu Phe Pro Asn Leu Thr Val Ile Arg Gly Trp Lys Leu Phe
            100   105   110

Tyr Asn Tyr Ala Leu Val Ile Phe Glu Met Thr Asn Leu Lys Asp Ile
        115   120   125

Gly Leu Tyr Asn Leu Arg Asn Ile Thr Arg Gly Ala Ile Arg Ile Glu
    130   135   140

Lys Asn Ala Asp Leu Cys Tyr Leu Ser Thr Val Asp Trp Ser Leu Ile
145   150   155   160

Leu Asp Ala Val Ser Asn Asn Tyr Ile Val Gly Asn Lys Pro Pro Lys
                165   170   175

Glu Cys Gly Asp Leu Cys Pro Gly Thr Met Glu Glu Lys Pro Met Cys
            180   185   190

Glu Lys Thr Thr Ile Asn Asn Glu Tyr Asn Tyr Arg Cys Trp Thr Thr
            195   200   205

Asn Arg Cys Gln Lys Met Cys Pro Ser Thr Cys Gly Lys Arg Ala Cys
    210   215   220

```
Thr Glu Asn Asn Glu Cys Cys His Pro Glu Cys Leu Gly Ser Cys Ser
225             230         235                         240


Ala Pro Asp Asn Asp Thr Ala Cys Val Ala Cys Arg His Tyr Tyr Tyr
                245             250                 255


Ala Gly Val Cys Val Pro Ala Cys Pro Pro Asn Thr Tyr Arg Phe Glu
            260             265                 270


Gly Trp Arg Cys Val Asp Arg Asp Phe Cys Ala Asn Ile Leu Ser Ala
        275             280                 285


Glu Ser Ser Asp Ser Glu Gly Phe Val Ile His Asp Gly Glu Cys Met
    290             295                 300


Gln Glu Cys Pro Ser Gly Phe Ile Arg Asn Gly Ser Gln Ser Met Tyr
305             310                 315                 320


Cys Ile Pro Cys Glu Gly Pro Cys Pro Lys Val Cys Glu Glu Glu Lys
            325                 330                 335


Lys Thr Lys Thr Ile Asp Ser Val Thr Ser Ala Gln Met Leu Gln Gly
            340                 345                 350


Cys Thr Ile Phe Lys Gly Asn Leu Leu Ile Asn Ile Arg Arg Gly Asn
        355                 360                 365


Asn Ile Ala Ser Glu Leu Glu Asn Phe Met Gly Leu Ile Glu Val Val
    370                 375                 380


Thr Gly Tyr Val Lys Ile Arg His Ser His Ala Leu Val Ser Leu Ser
385                 390                 395                 400


Phe Leu Lys Asn Leu Arg Leu Ile Leu Gly Glu Glu Gln Leu Glu Gly
            405                 410                 415


Asn Tyr Ser Phe Tyr Val Leu Asp Asn Gln Asn Leu Gln Gln Leu Trp
            420                 425                 430


Asp Trp Asp His Arg Asn Leu Thr Ile Lys Ala Gly Lys Met Tyr Phe
            435                 440                 445
```

```
Ala Phe Asn Pro Lys Leu Cys Val Ser Glu Ile Tyr Arg Met Glu Glu
    450                 455             460

Val Thr Gly Thr Lys Gly Arg Gln Ser Lys Gly Asp Ile Asn Thr Arg
465                 470             475                 480

Asn Asn Gly Glu Arg Ala Ser Cys Glu Ser Asp Val Leu His Phe Thr
                485             490                 495

Ser Thr Thr Thr Ser Lys Asn Arg Ile Ile Ile Thr Trp His Arg Tyr
            500             505                 510

Arg Pro Pro Asp Tyr Arg Asp Leu Ile Ser Phe Thr Val Tyr Tyr Lys
        515             520             525

Glu Ala Pro Phe Lys Asn Val Thr Glu Tyr Asp Gly Gln Asp Ala Cys
    530             535             540

Gly Ser Asn Ser Trp Asn Met Val Asp Val Asp Leu Pro Pro Asn Lys
545             550             555                     560

Asp Val Glu Pro Gly Ile Leu Leu His Gly Leu Lys Pro Trp Thr Gln
            565             570             575

Tyr Ala Val Tyr Val Lys Ala Val Thr Leu Thr Met Val Glu Asn Asp
        580             585             590

His Ile Arg Gly Ala Lys Ser Glu Ile Leu Tyr Ile Arg Thr Asn Ala
        595             600             605

Ser Val Pro Ser Ile Pro Leu Asp Val Leu Ser Ala Ser Asn Ser Ser
    610             615             620

Ser Gln Leu Ile Val Lys Trp Asn Pro Pro Ser Leu Pro Asn Gly Asn
625             630             635             640

Leu Ser Tyr Tyr Ile Val Arg Trp Gln Arg Gln Pro Gln Asp Gly Tyr
            645             650                 655

Leu Tyr Arg His Asn Tyr Cys Ser Lys Asp Lys Ile Pro Ile Arg Lys
            660             665             670

Tyr Ala Asp Gly Thr Ile Asp Ile Glu Glu Val Thr Glu Asn Pro Lys
```

Thr Glu Val Cys Gly Gly Glu Lys Gly Pro Cys Cys Ala Cys Pro Lys
    690   695   700

Thr Glu Ala Glu Lys Gln Ala Glu Lys Glu Glu Ala Glu Tyr Arg Lys
705   710   715   720

Val Phe Glu Asn Phe Leu His Asn Ser Ile Phe Val Pro Arg Pro Glu
             725   730   735

Arg Lys Arg Arg Asp Val Met Gln Val Ala Asn Thr Thr Met Ser Ser
          740   745   750

Arg Ser Arg Asn Thr Thr Ala Ala Asp Thr Tyr Asn Ile Thr Asp Pro
          755   760   765

Glu Glu Leu Glu Thr Glu Tyr Pro Phe Phe Glu Ser Arg Val Asp Asn
    770   775   780

Lys Glu Arg Thr Val Ile Ser Asn Leu Arg Pro Phe Thr Leu Tyr Arg
785   790   795   800

Ile Asp Ile His Ser Cys Asn His Glu Ala Glu Lys Leu Gly Cys Ser
             805   810   815

Ala Ser Asn Phe Val Phe Ala Arg Thr Met Pro Ala Glu Gly Ala Asp
          820   825   830

Asp Ile Pro Gly Pro Val Thr Trp Glu Pro Arg Pro Glu Asn Ser Ile
          835   840   845

Phe Leu Lys Trp Pro Glu Pro Glu Asn Pro Asn Gly Leu Ile Leu Met
    850   855   860

Tyr Glu Ile Lys Tyr Gly Ser Gln Val Glu Asp Gln Arg Glu Cys Val
865   870   875   880

Ser Arg Gln Glu Tyr Arg Lys Tyr Gly Gly Ala Lys Leu Asn Arg Leu
          885   890   895

Asn Pro Gly Asn Tyr Thr Ala Arg Ile Gln Ala Thr Ser Leu Ser Gly
          900   905   910

```
Asn Gly Ser Trp Thr Asp Pro Val Phe Phe Tyr Val Gln Ala Lys Thr
    915             920             925

Gly Tyr Glu Asn Phe Ile His Leu Ile Ile Ala Leu Pro Val Ala Val
    930             935             940

Leu Leu Ile Val Gly Gly Leu Val Ile Met Leu Tyr Val Phe His Arg
945             950             955             960

Lys Arg Asn Asn Ser Arg Leu Gly Asn Gly Val Leu Tyr Ala Ser Val
            965             970             975

Asn Pro Glu Tyr Phe Ser Ala Ala Asp Val Tyr Val Pro Asp Glu Trp
            980             985             990

Glu Val Ala Arg Glu Lys Ile Thr  Met Ser Arg Glu Leu  Gly Gln Gly
        995             1000            1005

Ser Phe  Gly Met Val Tyr Glu  Gly Val Ala Lys Gly  Val Val Lys
    1010            1015            1020

Asp Glu  Pro Glu Thr Arg Val  Ala Ile Lys Thr Val  Asn Glu Ala
    1025            1030            1035

Ala Ser  Met Arg Glu Arg Ile  Glu Phe Leu Asn Glu  Ala Ser Val
    1040            1045            1050

Met Lys  Glu Phe Asn Cys His  His Val Val Arg Leu  Leu Gly Val
    1055            1060            1065

Val Ser  Gln Gly Gln Pro Thr  Leu Val Ile Met Glu  Leu Met Thr
    1070            1075            1080

Arg Gly  Asp Leu Lys Ser Tyr  Leu Arg Ser Leu Arg  Pro Glu Met
    1085            1090            1095

Glu Asn  Asn Pro Val Leu Ala  Pro Pro Ser Leu Ser  Lys Met Ile
    1100            1105            1110

Gln Met  Ala Gly Glu Ile Ala  Asp Gly Met Ala Tyr  Leu Asn Ala
    1115            1120            1125
```

```
Asn Lys  Phe Val His Arg Asp  Leu Ala Ala Arg Asn  Cys Met Val
    1130             1135             1140

Ala Glu  Asp Phe Thr Val Lys  Ile Gly Asp Phe Gly  Met Thr Arg
    1145             1150             1155

Asp Ile  Tyr Glu Thr Asp Tyr  Tyr Arg Lys Gly Gly  Lys Gly Leu
    1160             1165             1170

Leu Pro  Val Arg Trp Met Ser  Pro Glu Ser Leu Lys  Asp Gly Val
    1175             1180             1185

Phe Thr  Thr Tyr Ser Asp Val  Trp Ser Phe Gly Val  Val Leu Trp
    1190             1195             1200

Glu Ile  Ala Thr Leu Ala Glu  Gln Pro Tyr Gln Gly  Leu Ser Asn
    1205             1210             1215

Glu Gln  Val Leu Arg Phe Val  Met Glu Gly Gly Leu  Leu Asp Lys
    1220             1225             1230

Pro Asp  Asn Cys Pro Asp Met  Leu Phe Glu Leu Met  Arg Met Cys
    1235             1240             1245

Trp Gln  Tyr Asn Pro Lys Met  Arg Pro Ser Phe Leu  Glu Ile Ile
    1250             1255             1260

Ser Ser  Ile Lys Glu Glu Met  Glu Pro Gly Phe Arg  Glu Val Ser
    1265             1270             1275

Phe Tyr  Tyr Ser Glu Glu Asn  Lys Leu Pro Glu Pro  Glu Glu Leu
    1280             1285             1290

Asp Leu  Glu Pro Glu Asn Met  Glu Ser Val Pro Leu  Asp Pro Ser
    1295             1300             1305

Ala Ser  Ser Ser Ser Leu Pro  Leu Pro Asp Arg His  Ser Gly His
    1310             1315             1320

Lys Ala  Glu Asn Gly Pro Gly  Pro Gly Val Leu Val  Leu Arg Ala
    1325             1330             1335
```

Ser Phe Asp Glu Arg Gln Pro Tyr Ala His Met Asn Gly Gly Arg
    1340   1345   1350

Lys Asn Glu Arg Ala Leu Pro Leu Pro Gln Ser Ser Thr Cys
    1355   1360   1365

<210> 24
<211> 825
<212> PRT
<213> Homo sapiens

<400> 24

Met Gly Trp Leu Cys Ser Gly Leu Leu Phe Pro Val Ser Cys Leu Val
1   5   10   15

Leu Leu Gln Val Ala Ser Ser Gly Asn Met Lys Val Leu Gln Glu Pro
            20   25   30

Thr Cys Val Ser Asp Tyr Met Ser Ile Ser Thr Cys Glu Trp Lys Met
            35   40   45

Asn Gly Pro Thr Asn Cys Ser Thr Glu Leu Arg Leu Leu Tyr Gln Leu
    50   55   60

Val Phe Leu Leu Ser Glu Ala His Thr Cys Ile Pro Glu Asn Asn Gly
65   70   75   80

Gly Ala Gly Cys Val Cys His Leu Leu Met Asp Asp Val Val Ser Ala
            85   90   95

Asp Asn Tyr Thr Leu Asp Leu Trp Ala Gly Gln Gln Leu Leu Trp Lys
            100   105   110

Gly Ser Phe Lys Pro Ser Glu His Val Lys Pro Arg Ala Pro Gly Asn
            115   120   125

Leu Thr Val His Thr Asn Val Ser Asp Thr Leu Leu Leu Thr Trp Ser
    130   135   140

Asn Pro Tyr Pro Pro Asp Asn Tyr Leu Tyr Asn His Leu Thr Tyr Ala
145   150   155   160

Val Asn Ile Trp Ser Glu Asn Asp Pro Ala Asp Phe Arg Ile Tyr Asn
                165   170   175

```
Val Thr Tyr Leu Glu Pro Ser Leu Arg Ile Ala Ala Ser Thr Leu Lys
        180                 185                 190

Ser Gly Ile Ser Tyr Arg Ala Arg Val Arg Ala Trp Ala Gln Cys Tyr
        195             200             205

Asn Thr Thr Trp Ser Glu Trp Ser Pro Ser Thr Lys Trp His Asn Ser
    210             215             220

Tyr Arg Glu Pro Phe Glu Gln His Leu Leu Leu Gly Val Ser Val Ser
225             230             235             240

Cys Ile Val Ile Leu Ala Val Cys Leu Leu Cys Tyr Val Ser Ile Thr
            245             250             255

Lys Ile Lys Lys Glu Trp Trp Asp Gln Ile Pro Asn Pro Ala Arg Ser
        260             265             270

Arg Leu Val Ala Ile Ile Ile Gln Asp Ala Gln Gly Ser Gln Trp Glu
        275             280             285

Lys Arg Ser Arg Gly Gln Glu Pro Ala Lys Cys Pro His Trp Lys Asn
    290             295             300

Cys Leu Thr Lys Leu Leu Pro Cys Phe Leu Glu His Asn Met Lys Arg
305             310             315             320

Asp Glu Asp Pro His Lys Ala Ala Lys Glu Met Pro Phe Gln Gly Ser
            325             330             335

Gly Lys Ser Ala Trp Cys Pro Val Glu Ile Ser Lys Thr Val Leu Trp
            340             345             350

Pro Glu Ser Ile Ser Val Val Arg Cys Val Glu Leu Phe Glu Ala Pro
            355             360             365

Val Glu Cys Glu Glu Glu Glu Glu Val Glu Glu Glu Lys Gly Ser Phe
    370             375             380

Cys Ala Ser Pro Glu Ser Ser Arg Asp Asp Phe Gln Glu Gly Arg Glu
385             390             395             400
```

```
Gly Ile Val Ala Arg Leu Thr Glu Ser Leu Phe Leu Asp Leu Leu Gly
            405                 410             415

Glu Glu Asn Gly Gly Phe Cys Gln Gln Asp Met Gly Glu Ser Cys Leu
            420                 425             430

Leu Pro Pro Ser Gly Ser Thr Ser Ala His Met Pro Trp Asp Glu Phe
            435                 440             445

Pro Ser Ala Gly Pro Lys Glu Ala Pro Pro Trp Gly Lys Glu Gln Pro
            450                 455             460

Leu His Leu Glu Pro Ser Pro Pro Ala Ser Pro Thr Gln Ser Pro Asp
465                 470                 475             480

Asn Leu Thr Cys Thr Glu Thr Pro Leu Val Ile Ala Gly Asn Pro Ala
            485                 490             495

Tyr Arg Ser Phe Ser Asn Ser Leu Ser Gln Ser Pro Cys Pro Arg Glu
            500                 505             510

Leu Gly Pro Asp Pro Leu Leu Ala Arg His Leu Glu Glu Val Glu Pro
            515                 520             525

Glu Met Pro Cys Val Pro Gln Leu Ser Glu Pro Thr Thr Val Pro Gln
            530                 535             540

Pro Glu Pro Glu Thr Trp Glu Gln Ile Leu Arg Arg Asn Val Leu Gln
545                 550                 555             560

His Gly Ala Ala Ala Ala Pro Val Ser Ala Pro Thr Ser Gly Tyr Gln
            565                 570             575

Glu Phe Val His Ala Val Glu Gln Gly Gly Thr Gln Ala Ser Ala Val
            580                 585             590

Val Gly Leu Gly Pro Pro Gly Glu Ala Gly Tyr Lys Ala Phe Ser Ser
            595                 600             605

Leu Leu Ala Ser Ser Ala Val Ser Pro Glu Lys Cys Gly Phe Gly Ala
            610                 615             620
```

```
Ser Ser Gly Glu Glu Gly Tyr Lys Pro Phe Gln Asp Leu Ile Pro Gly
625             630             635             640


Cys Pro Gly Asp Pro Ala Pro Val Pro Val Pro Leu Phe Thr Phe Gly
            645             650             655


Leu Asp Arg Glu Pro Pro Arg Ser Pro Gln Ser Ser His Leu Pro Ser
            660             665             670


Ser Ser Pro Glu His Leu Gly Leu Glu Pro Gly Glu Lys Val Glu Asp
            675             680             685


Met Pro Lys Pro Pro Leu Pro Gln Glu Gln Ala Thr Asp Pro Leu Val
        690             695             700


Asp Ser Leu Gly Ser Gly Ile Val Tyr Ser Ala Leu Thr Cys His Leu
705             710             715             720


Cys Gly His Leu Lys Gln Cys His Gly Gln Glu Asp Gly Gly Gln Thr
            725             730             735


Pro Val Met Ala Ser Pro Cys Cys Gly Cys Cys Cys Gly Asp Arg Ser
            740         .       745             750


Ser Pro Pro Thr Thr Pro Leu Arg Ala Pro Asp Pro Ser Pro Gly Gly
            755             760             765


Val Pro Leu Glu Ala Ser Leu Cys Pro Ala Ser Leu Ala Pro Ser Gly
        770             775             780


Ile Ser Glu Lys Ser Lys Ser Ser Ser Ser Phe His Pro Ala Pro Gly
785             790             795             800


Asn Ala Gln Ser Ser Ser Gln Thr Pro Lys Ile Val Asn Phe Val Ser
            805             810             815


Val Gly Pro Thr Tyr Met Arg Val Ser
            820             825


<210>   25
<211>   569
<212>   PRT
<213>   Homo sapiens
```

<400> 25

Met Lys Val Leu Leu Arg Leu Ile Cys Phe Ile Ala Leu Leu Ile Ser
1   5   10   15

Ser Leu Glu Ala Asp Lys Cys Lys Glu Arg Glu Glu Lys Ile Ile Leu
            20   25   30

Val Ser Ser Ala Asn Glu Ile Asp Val Arg Pro Cys Pro Leu Asn Pro
            35   40   45

Asn Glu His Lys Gly Thr Ile Thr Trp Tyr Lys Asp Asp Ser Lys Thr
        50   55   60

Pro Val Ser Thr Glu Gln Ala Ser Arg Ile His Gln His Lys Glu Lys
65   70   75   80

Leu Trp Phe Val Pro Ala Lys Val Glu Asp Ser Gly His Tyr Tyr Cys
                85   90   95

Val Val Arg Asn Ser Ser Tyr Cys Leu Arg Ile Lys Ile Ser Ala Lys
            100   105   110

Phe Val Glu Asn Glu Pro Asn Leu Cys Tyr Asn Ala Gln Ala Ile Phe
            115   120   125

Lys Gln Lys Leu Pro Val Ala Gly Asp Gly Gly Leu Val Cys Pro Tyr
    130   135   140

Met Glu Phe Phe Lys Asn Glu Asn Asn Glu Leu Pro Lys Leu Gln Trp
145   150   155   160

Tyr Lys Asp Cys Lys Pro Leu Leu Leu Asp Asn Ile His Phe Ser Gly
            165   170   175

Val Lys Asp Arg Leu Ile Val Met Asn Val Ala Glu Lys His Arg Gly
            180   185   190

Asn Tyr Thr Cys His Ala Ser Tyr Thr Tyr Leu Gly Lys Gln Tyr Pro
            195   200   205

Ile Thr Arg Val Ile Glu Phe Ile Thr Leu Glu Glu Asn Lys Pro Thr
            210   215   220

```
Arg Pro Val Ile Val Ser Pro Ala Asn Glu Thr Met Glu Val Asp Leu
225                 230         235             240


Gly Ser Gln Ile Gln Leu Ile Cys Asn Val Thr Gly Gln Leu Ser Asp
                245             250             255


Ile Ala Tyr Trp Lys Trp Asn Gly Ser Val Ile Asp Glu Asp Asp Pro
            260             265             270


Val Leu Gly Glu Asp Tyr Tyr Ser Val Glu Asn Pro Ala Asn Lys Arg
            275             280             285


Arg Ser Thr Leu Ile Thr Val Leu Asn Ile Ser Glu Ile Glu Ser Arg
        290             295             300


Phe Tyr Lys His Pro Phe Thr Cys Phe Ala Lys Asn Thr His Gly Ile
305             310             315             320


Asp Ala Ala Tyr Ile Gln Leu Ile Tyr Pro Val Thr Asn Phe Gln Lys
            325             330             335


His Met Ile Gly Ile Cys Val Thr Leu Thr Val Ile Ile Val Cys Ser
            340             345             350


Val Phe Ile Tyr Lys Ile Phe Lys Ile Asp Ile Val Leu Trp Tyr Arg
            355             360             365


Asp Ser Cys Tyr Asp Phe Leu Pro Ile Lys Ala Ser Asp Gly Lys Thr
        370             375             380


Tyr Asp Ala Tyr Ile Leu Tyr Pro Lys Thr Val Gly Glu Gly Ser Thr
385             390             395             400


Ser Asp Cys Asp Ile Phe Val Phe Lys Val Leu Pro Glu Val Leu Glu
            405             410             415


Lys Gln Cys Gly Tyr Lys Leu Phe Ile Tyr Gly Arg Asp Asp Tyr Val
            420             425             430


Gly Glu Asp Ile Val Glu Val Ile Asn Glu Asn Val Lys Lys Ser Arg
            435             440             445
```

```
Arg Leu Ile Ile Ile Leu Val Arg Glu Thr Ser Gly Phe Ser Trp Leu
    450             455             460

Gly Gly Ser Ser Glu Glu Gln Ile Ala Met Tyr Asn Ala Leu Val Gln
465             470             475             480

Asp Gly Ile Lys Val Val Leu Leu Glu Leu Glu Lys Ile Gln Asp Tyr
                485             490             495

Glu Lys Met Pro Glu Ser Ile Lys Phe Ile Lys Gln Lys His Gly Ala
            500             505             510

Ile Arg Trp Ser Gly Asp Phe Thr Gln Gly Pro Gln Ser Ala Lys Thr
            515             520             525

Arg Phe Trp Lys Asn Val Arg Tyr His Met Pro Val Gln Arg Arg Ser
    530             535             540

Pro Ser Ser Lys His Gln Leu Leu Ser Pro Ala Thr Lys Glu Lys Leu
545             550             555             560

Gln Arg Glu Ala His Val Pro Leu Gly
                565


<210>  26
<211>  576
<212>  PRT
<213>  Mus sp.

<400>  26

Met Glu Asn Met Lys Val Leu Leu Gly Leu Ile Cys Leu Met Val Pro
1               5                   10              15

Leu Leu Ser Leu Glu Ile Asp Val Cys Thr Glu Tyr Pro Asn Gln Ile
            20              25              30

Val Leu Phe Leu Ser Val Asn Glu Ile Asp Ile Arg Lys Cys Pro Leu
            35              40              45

Thr Pro Asn Lys Met His Gly Asp Thr Ile Ile Trp Tyr Lys Asn Asp
    50              55              60

Ser Lys Thr Pro Ile Ser Ala Asp Arg Asp Ser Arg Ile His Gln Gln
65              70              75              80
```

```
Asn Glu His Leu Trp Phe Val Pro Ala Lys Val Glu Asp Ser Gly Tyr
            85                  90              95

Tyr Tyr Cys Ile Val Arg Asn Ser Thr Tyr Cys Leu Lys Thr Lys Val
            100             105             110

Thr Val Thr Val Leu Glu Asn Asp Pro Gly Leu Cys Tyr Ser Thr Gln
            115             120             125

Ala Thr Phe Pro Gln Arg Leu His Ile Ala Gly Asp Gly Ser Leu Val
    130             135             140

Cys Pro Tyr Val Ser Tyr Phe Lys Asp Glu Asn Asn Glu Leu Pro Glu
145             150             155             160

Val Gln Trp Tyr Lys Asn Cys Lys Pro Leu Leu Leu Asp Asn Val Ser
            165             170             175

Phe Phe Gly Val Lys Asp Lys Leu Leu Val Arg Asn Val Ala Glu Glu
            180             185             190

His Arg Gly Asp Tyr Ile Cys Arg Met Ser Tyr Thr Phe Arg Gly Lys
        195             200             205

Gln Tyr Pro Val Thr Arg Val Ile Gln Phe Ile Thr Ile Asp Glu Asn
    210             215             220

Lys Arg Asp Arg Pro Val Ile Leu Ser Pro Arg Asn Glu Thr Ile Glu
225             230             235             240

Ala Asp Pro Gly Ser Met Ile Gln Leu Ile Cys Asn Val Thr Gly Gln
            245             250             255

Phe Ser Asp Leu Val Tyr Trp Lys Trp Asn Gly Ser Glu Ile Glu Trp
            260             265             270

Asn Asp Pro Phe Leu Ala Glu Asp Tyr Gln Phe Val Glu His Pro Ser
            275             280             285

Thr Lys Arg Lys Tyr Thr Leu Ile Thr Thr Leu Asn Ile Ser Glu Val
    290             295             300
```

```
Lys Ser Gln Phe Tyr Arg Tyr Pro Phe Ile Cys Val Val Lys Asn Thr
305             310         315             320

Asn Ile Phe Glu Ser Ala His Val Gln Leu Ile Tyr Pro Val Pro Asp
            325             330             335

Phe Lys Asn Tyr Leu Ile Gly Gly Phe Ile Ile Leu Thr Ala Thr Ile
            340             345             350

Val Cys Cys Val Cys Ile Tyr Lys Val Phe Lys Val Asp Ile Val Leu
        355             360             365

Trp Tyr Arg Asp Ser Cys Ser Gly Phe Leu Pro Ser Lys Ala Ser Asp
    370             375             380

Gly Lys Thr Tyr Asp Ala Tyr Ile Leu Tyr Pro Lys Thr Leu Gly Glu
385             390             395             400

Gly Ser Phe Ser Asp Leu Asp Thr Phe Val Phe Lys Leu Leu Pro Glu
            405             410             415

Val Leu Glu Gly Gln Phe Gly Tyr Lys Leu Phe Ile Tyr Gly Arg Asp
            420             425             430

Asp Tyr Val Gly Glu Asp Thr Ile Glu Val Thr Asn Glu Asn Val Lys
        435             440             445

Lys Ser Arg Arg Leu Ile Ile Ile Leu Val Arg Asp Met Gly Gly Phe
    450             455             460

Ser Trp Leu Gly Gln Ser Ser Glu Glu Gln Ile Ala Ile Tyr Asn Ala
465             470             475             480

Leu Ile Gln Glu Gly Ile Lys Ile Val Leu Leu Glu Leu Glu Lys Ile
            485             490             495

Gln Asp Tyr Glu Lys Met Pro Asp Ser Ile Gln Phe Ile Lys Gln Lys
            500             505             510

His Gly Val Ile Cys Trp Ser Gly Asp Phe Gln Glu Arg Pro Gln Ser
            515             520             525
```

```
Ala Lys Thr Arg Phe Trp Lys Asn Leu Arg Tyr Gln Met Pro Ala Gln
    530             535             540

Arg Arg Ser Pro Leu Ser Lys His Arg Leu Leu Thr Leu Asp Pro Val
545             550             555             560

Arg Asp Thr Lys Glu Lys Leu Pro Ala Ala Thr His Leu Pro Leu Gly
                565             570             575


<210>  27
<211>  576
<212>  PRT
<213>  Rattus sp.

<400>  27

Met Glu Asn Met Lys Val Leu Leu Gly Phe Ile Cys Leu Ile Val Pro
1               5               10              15

Leu Leu Ser Leu Glu Thr Asp Lys Cys Thr Glu Tyr Pro Asn Glu Val
            20              25              30

Ile Ser Phe Ser Ser Val Asn Glu Ile Asp Ile Arg Ser Cys Pro Leu
        35              40              45

Thr Pro Asn Glu Met His Gly Gly Thr Ile Ile Trp Tyr Lys Asn Asp
    50              55              60

Ser Lys Thr Pro Ile Ser Ala Asp Lys Asp Ser Arg Ile His Gln Gln
65              70              75              80

Asn Glu His Leu Trp Phe Val Pro Ala Lys Met Glu Asp Ser Gly Tyr
            85              90              95

Tyr Tyr Cys Ile Met Arg Asn Ser Thr Tyr Cys Leu Lys Thr Lys Ile
            100             105             110

Thr Met Ser Val Leu Glu Asn Asp Pro Gly Leu Cys Tyr Asn Thr Gln
        115             120             125

Ala Ser Phe Ile Gln Arg Leu His Val Ala Gly Asp Gly Ser Leu Val
    130             135             140

Cys Pro Tyr Leu Asp Phe Phe Lys Asp Glu Asn Asn Glu Leu Pro Lys
145             150             155             160
```

```
Val Gln Trp Tyr Lys Asn Cys Lys Pro Leu Pro Leu Asp Asp Gly Asn
            165             170             175

Phe Phe Gly Phe Lys Asn Lys Leu Met Val Met Asn Val Ala Glu Glu
            180             185             190

His Arg Gly Asn Tyr Thr Cys Arg Thr Ser Tyr Thr Tyr Gln Gly Lys
            195             200             205

Gln Tyr Pro Val Thr Arg Val Ile Thr Phe Ile Thr Ile Asp Asp Ser
    210             215             220

Lys Arg Asp Arg Pro Val Ile Met Ser Pro Arg Asn Glu Thr Met Glu
225             230             235             240

Ala Asp Pro Gly Ser Thr Ile Gln Leu Ile Cys Asn Val Thr Gly Gln
            245             250             255

Phe Thr Asp Leu Val Tyr Trp Lys Trp Asn Gly Ser Glu Ile Glu Trp
            260             265             270

Asp Asp Pro Ile Leu Ala Glu Asp Tyr Gln Phe Leu Glu His Pro Ser
            275             280             285

Ala Lys Arg Lys Tyr Thr Leu Ile Thr Thr Leu Asn Val Ser Glu Val
    290             295             300

Lys Ser Gln Phe Tyr Arg Tyr Pro Phe Ile Cys Phe Val Lys Asn Thr
305             310             315             320

His Ile Leu Glu Thr Ala His Val Arg Leu Val Tyr Pro Val Pro Asp
            325             330             335

Phe Lys Asn Tyr Leu Ile Gly Gly Phe Ala Ile Phe Thr Ala Thr Ala
            340             345             350

Val Phe Cys Ala Cys Ile Tyr Lys Val Phe Lys Val Asp Ile Val Leu
            355             360             365

Trp Tyr Arg Asp Ser Cys Ser Asp Phe Leu Pro Arg Lys Ala Ser Asp
            370             375             380
```

```
Gly Arg Thr Tyr Asp Ala Tyr Val Leu Tyr Pro Lys Thr Tyr Gly Glu
385                 390             395                 400


Gly Ser Phe Ala Tyr Leu Asp Thr Phe Val Phe Lys Leu Leu Pro Glu
                405             410                 415


Val Leu Glu Gly Gln Phe Gly Tyr Lys Leu Phe Ile Cys Gly Arg Asp
            420             425             430


Asp Tyr Val Gly Glu Asp Thr Ile Glu Val Thr Asn Glu Asn Val Lys
        435             440             445


Arg Ser Arg Arg Leu Ile Ile Ile Leu Val Arg Asp Met Gly Ser Phe
    450             455             460


Ser Cys Leu Gly Gln Ser Ser Glu Glu Gln Ile Ala Ile Tyr Asp Ala
465             470             475             480


Leu Ile Arg Glu Gly Ile Lys Ile Ile Leu Leu Glu Leu Glu Lys Ile
            485             490             495


Gln Asp Tyr Glu Lys Met Pro Glu Ser Ile Gln Phe Ile Lys Gln Lys
        500             505             510


His Gly Ala Ile Cys Trp Ser Gly Asp Phe Lys Glu Arg Pro Gln Ser
        515             520             525


Ala Lys Thr Arg Phe Trp Lys Asn Leu Arg Tyr Gln Met Pro Ala Gln
    530             535             540


Arg Arg Ser Pro Leu Ser Lys His His Leu Leu Thr Leu Asp Pro Val
545             550             555             560


Leu Asp Thr Lys Glu Lys Leu Gln Ala Glu Thr His Leu Pro Leu Gly
            565             570             575


<210>   28
<211>   555
<212>   PRT
<213>   Equus sp.

<400>   28

Met His Lys Met Thr Ser Thr Phe Leu Leu Ile Gly His Leu Ile Leu
```

```
1                    5                        10                        15

Leu Ile Pro Leu Phe Ser Ala Glu Glu Cys Val Ile Cys Asn Tyr Phe
         20                  25                  30

Val Leu Val Gly Glu Pro Thr Ala Ile Ser Cys Pro Val Ile Thr Leu
         35                  40                  45

Pro Met Leu His Ser Asp Tyr Asn Leu Thr Trp Tyr Arg Asn Gly Ser
         50                  55                  60

Asn Met Pro Ile Thr Thr Glu Arg Arg Ala Arg Ile His Gln Arg Lys
65                  70                  75                  80

Gly Leu Leu Trp Phe Ile Pro Ala Ala Leu Glu Asp Ser Gly Leu Tyr
             85                  90                  95

Glu Cys Glu Val Arg Ser Leu Asn Arg Ser Lys Gln Lys Ile Ile Asn
             100                 105                 110

Leu Lys Val Phe Lys Asn Asp Asn Gly Leu Cys Phe Asn Gly Glu Met
         115                 120                 125

Lys Tyr Asp Gln Ile Val Lys Ser Ala Asn Ala Gly Lys Ile Ile Cys
         130                 135                 140

Pro Asp Leu Glu Asn Phe Lys Asp Glu Asp Asn Ile Asn Pro Glu Ile
145                 150                 155                 160

His Trp Tyr Lys Glu Cys Lys Ser Gly Phe Leu Glu Asp Lys Arg Leu
             165                 170                 175

Val Leu Ala Glu Gly Glu Asn Ala Ile Leu Ile Leu Asn Val Thr Ile
             180                 185                 190

Gln Asp Lys Gly Asn Tyr Thr Cys Arg Met Val Tyr Thr Tyr Met Gly
         195                 200                 205

Lys Gln Tyr Asn Val Ser Arg Thr Met Asn Leu Glu Val Lys Glu Ser
         210                 215                 220

Pro Leu Lys Met Arg Pro Glu Phe Ile Tyr Pro Asn Asn Asn Thr Ile
225                 230                 235                 240
```

```
Glu Val Glu Leu Gly Ser His Val Val Met Glu Cys Asn Val Ser Ser
             245                 250             255

Gly Val Tyr Gly Leu Leu Pro Tyr Trp Gln Val Asn Asp Glu Asp Val
             260                 265             270

Asp Ser Phe Asp Ser Thr Tyr Arg Glu Gln Phe Tyr Glu Glu Gly Met
             275                 280             285

Pro His Gly Ile Ala Val Ser Gly Thr Lys Phe Asn Ile Ser Glu Val
             290                 295             300

Lys Leu Lys Asp Tyr Ala Tyr Lys Phe Phe Cys His Phe Ile Tyr Asp
305                 310             315                 320

Ser Gln Glu Phe Thr Ser Tyr Ile Lys Leu Glu His Pro Val Gln Asn
             325                 330                 335

Ile Arg Gly Tyr Leu Ile Gly Gly Gly Ile Ser Leu Ile Phe Leu Leu
             340             345                 350

Phe Leu Ile Leu Ile Val Tyr Lys Ile Phe Lys Ile Asp Ile Val Leu
             355             360                 365

Trp Tyr Arg Ser Ser Cys His Pro Leu Leu Gly Lys Lys Val Ser Asp
    370                 375                 380

Gly Lys Ile Tyr Asp Ala Tyr Val Leu Tyr Pro Lys Asn Arg Glu Ser
385                 390                 395                 400

Cys Leu Tyr Ser Ser Asp Ile Phe Ala Leu Lys Ile Leu Pro Glu Val
             405                 410                 415

Leu Glu Arg Gln Cys Gly Tyr Asn Leu Phe Ile Phe Gly Arg Asn Asp
             420                 425                 430

Leu Ala Gly Glu Ala Val Ile Asp Val Thr Asp Glu Lys Ile His Gln
             435                 440                 445

Ser Arg Arg Val Ile Ile Ile Leu Val Pro Glu Pro Ser Cys Tyr Gly
    450                 455                 460
```

```
Ile Leu Glu Asp Ala Ser Glu Lys His Leu Ala Val Tyr Asn Ala Leu
465             470             475             480


Ile Gln Asp Gly Ile Lys Ile Ile Leu Ile Glu Leu Glu Lys Ile Glu
                485             490             495


Asp Tyr Ala Asn Met Pro Glu Ser Ile Lys Tyr Val Lys Gln Lys Tyr
                500             505             510


Gly Ala Ile Arg Trp Thr Gly Asp Phe Ser Glu Arg Ser His Ser Ala
            515             520             525


Ser Thr Arg Phe Trp Lys Lys Val Arg Tyr His Met Pro Ser Arg Lys
        530             535             540


His Gly Ser Ser Ser Gly Phe His Leu Ser Ser
545             550             555


<210>   29
<211>   825
<212>   PRT
<213>   Homo sapiens


<400>   29

Met Gly Trp Leu Cys Ser Gly Leu Leu Phe Pro Val Ser Cys Leu Val
1               5               10              15


Leu Leu Gln Val Ala Ser Ser Gly Asn Met Lys Val Leu Gln Glu Pro
                20              25              30


Thr Cys Val Ser Asp Tyr Met Ser Ile Ser Thr Cys Glu Trp Lys Met
            35              40              45


Asn Gly Pro Thr Asn Cys Ser Thr Glu Leu Arg Leu Leu Tyr Gln Leu
    50              55              60


Val Phe Leu Leu Ser Glu Ala His Thr Cys Ile Pro Glu Asn Asn Gly
65              70              75              80


Gly Ala Gly Cys Val Cys His Leu Leu Met Asp Asp Val Val Ser Ala
            85              90              95


Asp Asn Tyr Thr Leu Asp Leu Trp Ala Gly Gln Gln Leu Leu Trp Lys
```

```
                100                     105                     110

Gly Ser Phe Lys Pro Ser Glu His Val Lys Pro Arg Ala Pro Gly Asn
        115             120                 125

Leu Thr Val His Thr Asn Val Ser Asp Thr Leu Leu Leu Thr Trp Ser
    130             135             140

Asn Pro Tyr Pro Pro Asp Asn Tyr Leu Tyr Asn His Leu Thr Tyr Ala
145             150                 155                     160

Val Asn Ile Trp Ser Glu Asn Asp Pro Ala Asp Phe Arg Ile Tyr Asn
                165             170                 175

Val Thr Tyr Leu Glu Pro Ser Leu Arg Ile Ala Ala Ser Thr Leu Lys
            180             185                 190

Ser Gly Ile Ser Tyr Arg Ala Arg Val Arg Ala Trp Ala Gln Cys Tyr
        195             200                 205

Asn Thr Thr Trp Ser Glu Trp Ser Pro Ser Thr Lys Trp His Asn Ser
    210             215                 220

Tyr Arg Glu Pro Phe Glu Gln His Leu Leu Leu Gly Val Ser Val Ser
225             230                 235                     240

Cys Ile Val Ile Leu Ala Val Cys Leu Leu Cys Tyr Val Ser Ile Thr
            245             250                 255

Lys Ile Lys Lys Glu Trp Trp Asp Gln Ile Pro Asn Pro Ala Arg Ser
            260             265                 270

Arg Leu Val Ala Ile Ile Ile Gln Asp Ala Gln Gly Ser Gln Trp Glu
            275             280                 285

Lys Arg Ser Arg Gly Gln Glu Pro Ala Lys Cys Pro His Trp Lys Asn
    290             295                 300

Cys Leu Thr Lys Leu Leu Pro Cys Phe Leu Glu His Asn Met Lys Arg
305             310                 315                     320

Asp Glu Asp Pro His Lys Ala Ala Lys Glu Met Pro Phe Gln Gly Ser
            325             330                 335
```

```
Gly Lys Ser Ala Trp Cys Pro Val Glu Ile Ser Lys Thr Val Leu Trp
            340             345             350

Pro Glu Ser Ile Ser Val Val Arg Cys Val Glu Leu Phe Glu Ala Pro
            355             360             365

Val Glu Cys Glu Glu Glu Glu Glu Val Glu Glu Glu Lys Gly Ser Phe
    370             375             380

Cys Ala Ser Pro Glu Ser Ser Arg Asp Asp Phe Gln Glu Gly Arg Glu
385             390             395             400

Gly Ile Val Ala Arg Leu Thr Glu Ser Leu Phe Leu Asp Leu Leu Gly
            405             410             415

Glu Glu Asn Gly Gly Phe Cys Gln Gln Asp Met Gly Glu Ser Cys Leu
            420             425             430

Leu Pro Pro Ser Gly Ser Thr Ser Ala His Met Pro Trp Asp Glu Phe
        435             440             445

Pro Ser Ala Gly Pro Lys Glu Ala Pro Pro Trp Gly Lys Glu Gln Pro
    450             455             460

Leu His Leu Glu Pro Ser Pro Pro Ala Ser Pro Thr Gln Ser Pro Asp
465             470             475             480

Asn Leu Thr Cys Thr Glu Thr Pro Leu Val Ile Ala Gly Asn Pro Ala
            485             490             495

Tyr Arg Ser Phe Ser Asn Ser Leu Ser Gln Ser Pro Cys Pro Arg Glu
            500             505             510

Leu Gly Pro Asp Pro Leu Leu Ala Arg His Leu Glu Glu Val Glu Pro
            515             520             525

Glu Met Pro Cys Val Pro Gln Leu Ser Glu Pro Thr Thr Val Pro Gln
    530             535             540

Pro Glu Pro Glu Thr Trp Glu Gln Ile Leu Arg Arg Asn Val Leu Gln
545             550             555             560
```

```
His Gly Ala Ala Ala Ala Pro Val Ser Ala Pro Thr Ser Gly Tyr Gln
        565                 570              575

Glu Phe Val His Ala Val Glu Gln Gly Gly Thr Gln Ala Ser Ala Val
        580                 585              590

Val Gly Leu Gly Pro Pro Gly Glu Ala Gly Tyr Lys Ala Phe Ser Ser
        595                 600              605

Leu Leu Ala Ser Ser Ala Val Ser Pro Glu Lys Cys Gly Phe Gly Ala
610                 615              620

Ser Ser Gly Glu Glu Gly Tyr Lys Pro Phe Gln Asp Leu Ile Pro Gly
625                 630              635              640

Cys Pro Gly Asp Pro Ala Pro Val Pro Val Pro Leu Phe Thr Phe Gly
            645              650              655

Leu Asp Arg Glu Pro Pro Arg Ser Pro Gln Ser Ser His Leu Pro Ser
            660              665              670

Ser Ser Pro Glu His Leu Gly Leu Glu Pro Gly Glu Lys Val Glu Asp
        675              680              685

Met Pro Lys Pro Pro Leu Pro Gln Glu Gln Ala Thr Asp Pro Leu Val
        690              695              700

Asp Ser Leu Gly Ser Gly Ile Val Tyr Ser Ala Leu Thr Cys His Leu
705              710              715              720

Cys Gly His Leu Lys Gln Cys His Gly Gln Glu Asp Gly Gly Gln Thr
            725              730              735

Pro Val Met Ala Ser Pro Cys Cys Gly Cys Cys Cys Gly Asp Arg Ser
            740              745              750

Ser Pro Pro Thr Thr Pro Leu Arg Ala Pro Asp Pro Ser Pro Gly Gly
        755              760              765

Val Pro Leu Glu Ala Ser Leu Cys Pro Ala Ser Leu Ala Pro Ser Gly
    770              775              780
```

```
Ile Ser Glu Lys Ser Lys Ser Ser Ser Ser Phe His Pro Ala Pro Gly
785                 790             795                 800


Asn Ala Gln Ser Ser Ser Gln Thr Pro Lys Ile Val Asn Phe Val Ser
                805                 810                 815


Val Gly Pro Thr Tyr Met Arg Val Ser
            820                 825


<210>  30
<211>  9
<212>  PRT
<213>  Artificial

<220>
<223>  Peptide

<400>  30

Phe Val Phe Ala Arg Thr Met Pro Ala
1               5


<210>  31
<211>  10
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Description of Artificial Sequence:   Synthetic
       Peptide

<400>  31

Asn Gly Pro Lys Ile Pro Ser Ile Ala Thr
1               5                   10


<210>  32
<211>  9
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Description of Artificial Sequence:   Synthetic
       Peptide

<400>  32

Ala Thr Gly Gln Val Cys His Ala Leu
1               5


<210>  33
```

```
<211>    11
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    Description of Artificial Sequence:   Synthetic
         Peptide

<400>    33

Arg Lys Val Cys Asn Gly Ile Gly Ile Gly Glu
1                   5                   10


<210>    34
<211>    9
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    Description of Artificial Sequence:   Synthetic
         Peptide

<400>    34

Trp His Asn Ser Tyr Arg Glu Pro Phe
1                   5


<210>    35
<211>    10
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    Description of Artificial Sequence:   Synthetic
         Peptide

<400>    35

Tyr Arg Glu Pro Phe Glu Gln His Leu Leu
1                   5                   10


<210>    36
<211>    9
<212>    PRT
<213>    Artificial Sequence

<220>
<223>    Description of Artificial Sequence:   Synthetic
         Peptide

<400>    36

Ser Asp Thr Leu Leu Leu Thr Trp Ser
1                   5
```

```
<210>  37
<211>  8
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Description of Artificial Sequence:  Synthetic
       Peptide

<400>  37

Ile Tyr Asn Val Thr Tyr Leu Glu
1               5


<210>  38
<211>  11
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Description of Artificial Sequence:  Synthetic
       Peptide

<400>  38

Ile Ala Ala Ser Thr Leu Lys Ser Gly Ile Ser
1               5                   10


<210>  39
<211>  9
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Description of Artificial Sequence:  Synthetic
       Peptide

<400>  39

Lys Pro Ser Glu His Val Lys Pro Arg
1               5


<210>  40
<211>  11
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Description of Artificial Sequence:  Synthetic
       Peptide

<400>  40
```

Phe Thr Cys Glu Glu Asp Phe Tyr Phe Pro Trp
1   5   10

<210> 41
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
       Peptide

<400> 41

Ser Val Asp Glu Ile Val Gln Pro Asp
1   5

<210> 42
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
       Peptide

<400> 42

Met Asp Pro Ile Asp Thr Thr Ser Val Pro Val Tyr
1   5   10

<210> 43
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
       Peptide

<400> 43

Ile Asp Ala Ala Tyr Ile Gln Leu Ile Tyr Pro Val
1   5   10

<210> 44
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

Peptide

<400> 44

Leu Ile Tyr Pro Val Thr Asn Phe Gln Lys His Met
1   5   10

<210> 45
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      Peptide

<400> 45

Leu Glu Glu Asn Lys Pro Thr Arg Pro Val
1   5   10

<210> 46
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      Peptide

<400> 46

Asn Lys Pro Thr Arg Pro Val Ile Val Ser
1   5   10

<210> 47
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      Peptide

<400> 47

Val Ala Glu Lys His Arg Gly Asn Tyr Thr
1   5   10

<210> 48
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      Peptide

<400> 48

Trp Asn Gly Ser Val Ile Asp Glu Asp
1   5

<210> 49
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      Peptide

<400> 49

Val Pro Ala Pro Arg Tyr Thr Val Glu Leu
1   5   10

<210> 50
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      Peptide

<400> 50

Ala Pro Arg Tyr Thr Val Glu Leu Ala
1   5

<210> 51
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      Peptide

<400> 51

Val Gln Lys Asp Ser Cys Phe Asn Ser Pro Met
1   5   10

<210> 52

<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      Peptide

<400> 52

Met Lys Leu Pro Val His Lys Leu Tyr
1   5

<210> 53
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      Peptide

<400> 53

Val Gly Ser Pro Lys Asn Ala Val Pro Pro Val
1   5   10

<210> 54
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      Peptide

<400> 54

Val Thr Tyr Pro Glu Asn Gly Arg Thr Phe
1   5   10

<210> 55
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      Peptide

<400> 55

Ile His Ser Pro Asn Asp His Val Val Tyr
1   5   10

```
<210>   56
<211>   9
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Description of Artificial Sequence:   Synthetic
        Peptide

<400>   56

Leu Ile Ser Asn Asn Gly Asn Tyr Thr
1                   5


<210>   57
<211>   11
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Description of Artificial Sequence:   Synthetic
        Peptide

<400>   57

Val Trp Trp Thr Ile Asp Gly Lys Lys Pro Asp
1                   5                   10


<210>   58
<211>   11
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Description of Artificial Sequence:   Synthetic
        Peptide

<400>   58

Trp Thr Ile Asp Gly Lys Lys Pro Asp Asp Ile
1                   5                   10


<210>   59
<211>   11
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Description of Artificial Sequence:   Synthetic
        Peptide

<400>   59
```

His Ser Arg Thr Glu Asp Glu Thr Arg Thr Gln
1   5   10

<210> 60
<211> 810
<212> PRT
<213> Mus sp.

<400> 60

Met Gly Arg Leu Cys Thr Lys Phe Leu Thr Ser Val Gly Cys Leu Ile
1   5   10   15

Leu Leu Leu Val Thr Gly Ser Gly Ser Ile Lys Val Leu Gly Glu Pro
                20   25   30

Thr Cys Phe Ser Asp Tyr Ile Arg Thr Ser Thr Cys Glu Trp Phe Leu
        35   40   45

Asp Ser Ala Val Asp Cys Ser Ser Gln Leu Cys Leu His Tyr Arg Leu
        50   55   60

Met Phe Phe Glu Phe Ser Glu Asn Leu Thr Cys Ile Pro Arg Asn Ser
65   70   75   80

Ala Ser Thr Val Cys Val Cys His Met Glu Met Asn Arg Pro Val Gln
                85   90   95

Ser Asp Arg Tyr Gln Met Glu Leu Trp Ala Glu His Arg Gln Leu Trp
                100   105   110

Gln Gly Ser Phe Ser Pro Ser Gly Asn Val Lys Pro Leu Ala Pro Asp
                115   120   125

Asn Leu Thr Leu His Thr Asn Val Ser Asp Glu Trp Leu Leu Thr Trp
        130   135   140

Asn Asn Leu Tyr Pro Ser Asn Asn Leu Leu Tyr Lys Asp Leu Ile Ser
145   150   155   160

Met Val Asn Ile Ser Arg Glu Asp Asn Pro Ala Glu Phe Ile Val Tyr
                165   170   175

Asn Val Thr Tyr Lys Glu Pro Arg Leu Ser Phe Pro Ile Asn Ile Leu

```
                 180                    185                      190

Met Ser Gly Val Tyr Tyr Thr Ala Arg Val Arg Val Arg Ser Gln Ile
        195             200             205


Leu Thr Gly Thr Trp Ser Glu Trp Ser Pro Ser Ile Thr Trp Tyr Asn
        210             215             220


His Phe Gln Leu Pro Leu Ile Gln Arg Leu Pro Leu Gly Val Thr Ile
225             230             235             240


Ser Cys Leu Cys Ile Pro Leu Phe Cys Leu Phe Cys Tyr Phe Ser Ile
                245             250             255


Thr Lys Ile Lys Lys Ile Trp Trp Asp Gln Ile Pro Thr Pro Ala Arg
            260             265             270


Ser Pro Leu Val Ala Ile Ile Ile Gln Asp Ala Gln Val Pro Leu Trp
            275             280             285


Asp Lys Gln Thr Arg Ser Gln Glu Ser Thr Lys Tyr Pro His Trp Lys
    290             295             300


Thr Cys Leu Asp Lys Leu Leu Pro Cys Leu Leu Lys His Arg Val Lys
305             310             315             320


Lys Lys Thr Asp Phe Pro Lys Ala Ala Pro Thr Lys Ser Leu Gln Ser
            325             330             335


Pro Gly Lys Ala Gly Trp Cys Pro Met Glu Val Ser Arg Thr Val Leu
            340             345             350


Trp Pro Glu Asn Val Ser Val Ser Val Val Arg Cys Met Glu Leu Phe
            355             360             365


Glu Ala Pro Val Gln Asn Val Glu Glu Glu Glu Asp Glu Ile Val Lys
        370             375             380


Glu Asp Leu Ser Met Ser Pro Glu Asn Ser Gly Gly Cys Gly Phe Gln
385             390             395             400


Glu Ser Gln Ala Asp Ile Met Ala Arg Leu Thr Glu Asn Leu Phe Ser
            405             410             415
```

```
Asp Leu Leu Glu Ala Glu Asn Gly Gly Leu Gly Gln Ser Ala Leu Ala
        420                 425             430

Glu Ser Cys Ser Pro Leu Pro Ser Gly Ser Gly Gln Ala Ser Val Ser
        435             440             445

Trp Ala Cys Leu Pro Met Gly Pro Ser Glu Glu Ala Thr Cys Gln Val
    450             455             460

Thr Glu Gln Pro Ser His Pro Gly Pro Leu Ser Gly Ser Pro Ala Gln
465             470             475             480

Ser Ala Pro Thr Leu Ala Cys Thr Gln Val Pro Leu Val Leu Ala Asp
            485             490             495

Asn Pro Ala Tyr Arg Ser Phe Ser Asp Cys Cys Ser Pro Ala Pro Asn
            500             505             510

Pro Gly Glu Leu Ala Pro Glu Gln Gln Gln Ala Asp His Leu Glu Glu
        515             520             525

Glu Glu Pro Pro Ser Pro Ala Asp Pro His Ser Ser Gly Pro Pro Met
        530             535             540

Gln Pro Val Glu Ser Trp Glu Gln Ile Leu His Met Ser Val Leu Gln
545             550             555             560

His Gly Ala Ala Ala Gly Ser Thr Pro Ala Pro Ala Gly Gly Tyr Gln
            565             570             575

Glu Phe Val Gln Ala Val Lys Gln Gly Ala Ala Gln Asp Pro Gly Val
            580             585             590

Pro Gly Val Arg Pro Ser Gly Asp Pro Gly Tyr Lys Ala Phe Ser Ser
            595             600             605

Leu Leu Ser Ser Asn Gly Ile Arg Gly Asp Thr Ala Ala Ala Gly Thr
    610             615             620

Asp Asp Gly His Gly Gly Tyr Lys Pro Phe Gln Asn Pro Val Pro Asn
625             630             635             640
```

```
Gln Ser Pro Ser Ser Val Pro Leu Phe Thr Phe Gly Leu Asp Thr Glu
            645             650             655

Leu Ser Pro Ser Pro Leu Asn Ser Asp Pro Pro Lys Ser Pro Pro Glu
            660             665             670

Cys Leu Gly Leu Glu Leu Gly Leu Lys Gly Gly Asp Trp Val Lys Ala
            675             680             685

Pro Pro Pro Ala Asp Gln Val Pro Lys Pro Phe Gly Asp Asp Leu Gly
    690             695             700

Phe Gly Ile Val Tyr Ser Ser Leu Thr Cys His Leu Cys Gly His Leu
705             710             715             720

Lys Gln His His Ser Gln Glu Glu Gly Gly Gln Ser Pro Ile Val Ala
                725             730             735

Ser Pro Gly Cys Gly Cys Cys Tyr Asp Asp Arg Ser Pro Ser Leu Gly
            740             745             750

Ser Leu Ser Gly Ala Leu Glu Ser Cys Pro Glu Gly Ile Pro Pro Glu
            755             760             765

Ala Asn Leu Met Ser Ala Pro Lys Thr Pro Ser Asn Leu Ser Gly Glu
    770             775             780

Gly Lys Gly Pro Gly His Ser Pro Val Pro Ser Gln Thr Thr Glu Val
785             790             795             800

Pro Val Gly Ala Leu Gly Ile Ala Val Ser
            805             810
```

<210> 61
<211> 810
<212> PRT
<213> Equus sp.

<400> 61

```
Met Gly Arg Leu Cys Thr Lys Phe Leu Thr Ser Val Gly Cys Leu Ile
1               5               10              15


Leu Leu Leu Val Thr Gly Ser Gly Ser Ile Lys Val Leu Gly Glu Pro
```

```
                  20                        25                        30

Thr Cys Phe Ser Asp Tyr Ile Arg Thr Ser Thr Cys Glu Trp Phe Leu
        35                  40                  45


Asp Ser Ala Val Asp Cys Ser Ser Gln Leu Cys Leu His Tyr Arg Leu
        50                  55                  60


Met Phe Phe Glu Phe Ser Glu Asn Leu Ile Cys Ile Pro Arg Asn Ser
65                  70                  75                  80


Ala Ser Thr Val Cys Val Cys His Met Glu Met Asn Arg Pro Val Gln
                85                  90                  95


Ser Asp Arg Tyr Gln Met Glu Leu Trp Ala Glu His Arg Gln Leu Trp
            100                 105                 110


Gln Gly Ser Phe Ser Pro Ser Gly Asn Val Lys Pro Leu Ala Pro Asp
            115                 120                 125


Asn Leu Thr Leu His Thr Asn Val Ser Asp Glu Trp Leu Leu Thr Trp
    130                 135                 140


Asn Asn Leu Tyr Pro Ser Asn Asn Leu Leu Tyr Lys Asp Leu Ile Ser
145                 150                 155                 160


Met Val Asn Ile Ser Arg Glu Asp Asn Pro Ala Glu Phe Ile Val Tyr
            165                 170                 175


Asn Val Thr Tyr Lys Glu Pro Arg Leu Ser Phe Pro Ile Asn Ile Leu
            180                 185                 190


Met Ser Gly Val Tyr Tyr Thr Ala Arg Val Arg Val Arg Ser Gln Ile
            195                 200                 205


Leu Thr Gly Thr Trp Ser Glu Trp Ser Pro Ser Ile Thr Trp Tyr Asn
    210                 215                 220


His Phe Gln Leu Pro Leu Ile Gln Arg Leu Pro Leu Gly Val Thr Ile
225                 230                 235                 240


Ser Cys Leu Cys Ile Pro Leu Phe Cys Leu Phe Cys Tyr Phe Ser Ile
            245                 250                 255
```

```
Thr Lys Ile Lys Lys Ile Trp Trp Asp Gln Ile Pro Thr Pro Ala Arg
        260             265           270

Ser Pro Leu Val Ala Ile Ile Ile Gln Asp Ala Gln Val Pro Leu Trp
        275             280           285

Asp Lys Gln Thr Arg Ser Gln Glu Ser Thr Lys Tyr Pro His Trp Lys
        290             295           300

Thr Cys Leu Asp Lys Leu Leu Pro Cys Leu Leu Lys His Arg Val Lys
305             310           315           320

Lys Lys Thr Asp Phe Pro Lys Ala Ala Pro Thr Lys Ser Pro Gln Ser
            325           330           335

Pro Gly Lys Ala Gly Trp Cys Pro Met Glu Val Ser Arg Thr Val Leu
            340           345           350

Trp Pro Glu Asn Val Ser Val Ser Val Val Arg Cys Met Glu Leu Phe
        355           360           365

Glu Ala Pro Val Gln Asn Val Glu Glu Glu Glu Asp Glu Ile Val Lys
    370           375           380

Glu Asp Leu Ser Met Ser Pro Glu Asn Ser Gly Gly Cys Gly Phe Gln
385           390           395           400

Glu Ser Gln Ala Asp Ile Met Ala Arg Leu Thr Glu Asn Leu Phe Ser
            405           410           415

Asp Leu Leu Glu Ala Glu Asn Gly Gly Leu Gly Gln Ser Ala Leu Ala
            420           425           430

Glu Ser Cys Ser Pro Leu Pro Ser Gly Ser Gly Gln Ala Ser Val Ser
        435           440           445

Trp Ala Cys Leu Pro Met Gly Pro Ser Glu Glu Ala Thr Cys Gln Val
    450           455           460

Thr Glu Gln Pro Ser His Pro Gly Pro Leu Ser Gly Ser Pro Ala Gln
465           470           475           480
```

```
Ser Ala Pro Thr Leu Ala Cys Thr Gln Val Pro Leu Val Leu Ala Asp
            485             490         495

Asn Pro Ala Tyr Arg Ser Phe Ser Asp Cys Cys Ser Pro Ala Pro Asn
            500             505         510

Pro Gly Glu Leu Ala Pro Glu Gln Gln Gln Ala Asp His Leu Glu Glu
        515             520             525

Glu Glu Pro Pro Ser Pro Ala Asp Pro His Ser Ser Gly Pro Pro Met
        530             535             540

Gln Pro Val Glu Ser Trp Glu Gln Ile Leu His Met Ser Val Leu Gln
545             550             555             560

His Gly Ala Ala Ala Gly Ser Thr Pro Ala Pro Ala Gly Gly Tyr Gln
            565             570             575

Glu Phe Val Gln Ala Val Lys Gln Gly Ala Ala Gln Asp Pro Gly Val
        580             585             590

Pro Gly Val Arg Pro Ser Gly Asp Pro Gly Tyr Lys Ala Phe Ser Ser
        595             600             605

Leu Leu Ser Ser Asn Gly Ile Arg Gly Asp Thr Ala Ala Ala Gly Thr
    610             615             620

Asp Asp Gly His Gly Gly Tyr Lys Pro Phe Gln Asn Pro Val Pro Asn
625             630             635             640

Gln Ser Pro Ser Ser Val Pro Leu Phe Thr Phe Gly Leu Asp Thr Glu
            645             650             655

Leu Ser Pro Ser Pro Leu Asn Ser Asp Pro Pro Lys Ser Pro Pro Glu
            660             665             670

Cys Leu Gly Leu Glu Leu Gly Leu Lys Gly Gly Asp Trp Val Lys Ala
        675             680             685

Pro Pro Pro Ala Asp Gln Val Pro Lys Pro Phe Gly Asp Asp Leu Gly
    690             695             700
```

```
Phe Gly Ile Val Tyr Ser Ser Leu Thr Cys His Leu Cys Gly His Leu
705                 710             715             720


Lys Gln His His Ser Gln Glu Glu Gly Gly Gln Ser Pro Ile Val Ala
                    725             730             735


Ser Pro Gly Cys Gly Cys Cys Tyr Asp Asp Arg Ser Pro Ser Leu Gly
            740             745             750


Ser Leu Ser Gly Ala Leu Glu Ser Cys Pro Glu Gly Ile Pro Pro Glu
            755             760             765


Ala Asn Leu Met Ser Ala Pro Lys Thr Pro Ser Asn Leu Ser Gly Glu
    770             775             780


Gly Lys Gly Pro Gly His Ser Pro Val Pro Ser Gln Thr Thr Glu Val
785             790             795             800


Pro Val Gly Ala Leu Gly Ile Ala Val Ser
            805             810


<210>  62
<211>  1356
<212>  PRT
<213>  Homo sapiens

<400>  62

Met Gln Ser Lys Val Leu Leu Ala Val Ala Leu Trp Leu Cys Val Glu
1               5               10              15


Thr Arg Ala Ala Ser Val Gly Leu Pro Ser Val Ser Leu Asp Leu Pro
                20              25              30


Arg Leu Ser Ile Gln Lys Asp Ile Leu Thr Ile Lys Ala Asn Thr Thr
            35              40              45


Leu Gln Ile Thr Cys Arg Gly Gln Arg Asp Leu Asp Trp Leu Trp Pro
    50              55              60


Asn Asn Gln Ser Gly Ser Glu Gln Arg Val Glu Val Thr Glu Cys Ser
65              70              75              80


Asp Gly Leu Phe Cys Lys Thr Leu Thr Ile Pro Lys Val Ile Gly Asn
            85              90              95
```

Asp Thr Gly Ala Tyr Lys Cys Phe Tyr Arg Glu Thr Asp Leu Ala Ser
        100   105   110

Val Ile Tyr Val Tyr Val Gln Asp Tyr Arg Ser Pro Phe Ile Ala Ser
        115   120   125

Val Ser Asp Gln His Gly Val Val Tyr Ile Thr Glu Asn Lys Asn Lys
        130   135   140

Thr Val Val Ile Pro Cys Leu Gly Ser Ile Ser Asn Leu Asn Val Ser
145   150   155   160

Leu Cys Ala Arg Tyr Pro Glu Lys Arg Phe Val Pro Asp Gly Asn Arg
                165   170   175

Ile Ser Trp Asp Ser Lys Lys Gly Phe Thr Ile Pro Ser Tyr Met Ile
                180   185   190

Ser Tyr Ala Gly Met Val Phe Cys Glu Ala Lys Ile Asn Asp Glu Ser
                195   200   205

Tyr Gln Ser Ile Met Tyr Ile Val Val Val Val Gly Tyr Arg Ile Tyr
        210   215   220

Asp Val Val Leu Ser Pro Ser His Gly Ile Glu Leu Ser Val Gly Glu
225   230   235   240

Lys Leu Val Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val Gly Ile
                245   250   255

Asp Phe Asn Trp Glu Tyr Pro Ser Ser Lys His Gln His Lys Lys Leu
                260   265   270

Val Asn Arg Asp Leu Lys Thr Gln Ser Gly Ser Glu Met Lys Lys Phe
                275   280   285

Leu Ser Thr Leu Thr Ile Asp Gly Val Thr Arg Ser Asp Gln Gly Leu
        290   295   300

Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met Thr Lys Lys Asn Ser Thr
305   310   315   320

```
Phe Val Arg Val His Glu Lys Pro Phe Val Ala Phe Gly Ser Gly Met
            325                 330             335

Glu Ser Leu Val Glu Ala Thr Val Gly Glu Arg Val Arg Ile Pro Ala
            340                 345             350

Lys Tyr Leu Gly Tyr Pro Pro Pro Glu Ile Lys Trp Tyr Lys Asn Gly
            355                 360             365

Ile Pro Leu Glu Ser Asn His Thr Ile Lys Ala Gly His Val Leu Thr
            370                 375             380

Ile Met Glu Val Ser Glu Arg Asp Thr Gly Asn Tyr Thr Val Ile Leu
385                     390             395                 400

Thr Asn Pro Ile Ser Lys Glu Lys Gln Ser His Val Val Ser Leu Val
                405                 410             415

Val Tyr Val Pro Pro Gln Ile Gly Glu Lys Ser Leu Ile Ser Pro Val
            420                 425             430

Asp Ser Tyr Gln Tyr Gly Thr Thr Gln Thr Leu Thr Cys Thr Val Tyr
            435                 440             445

Ala Ile Pro Pro Pro His His Ile His Trp Tyr Trp Gln Leu Glu Glu
            450                 455             460

Glu Cys Ala Asn Glu Pro Ser Gln Ala Val Ser Val Thr Asn Pro Tyr
465                 470             475                 480

Pro Cys Glu Glu Trp Arg Ser Val Glu Asp Phe Gln Gly Gly Asn Lys
                485                 490             495

Ile Glu Val Asn Lys Asn Gln Phe Ala Leu Ile Glu Gly Lys Asn Lys
            500                 505             510

Thr Val Ser Thr Leu Val Ile Gln Ala Ala Asn Val Ser Ala Leu Tyr
            515                 520             525

Lys Cys Glu Ala Val Asn Lys Val Gly Arg Gly Glu Arg Val Ile Ser
        530                 535             540
```

```
Phe His Val Thr Arg Gly Pro Glu Ile Thr Leu Gln Pro Asp Met Gln
545             550             555             560

Pro Thr Glu Gln Glu Ser Val Ser Leu Trp Cys Thr Ala Asp Arg Ser
                565             570             575

Thr Phe Glu Asn Leu Thr Trp Tyr Lys Leu Gly Pro Gln Pro Leu Pro
                580             585             590

Ile His Val Gly Glu Leu Pro Thr Pro Val Cys Lys Asn Leu Asp Thr
            595             600             605

Leu Trp Lys Leu Asn Ala Thr Met Phe Ser Asn Ser Thr Asn Asp Ile
    610             615             620

Leu Ile Met Glu Leu Lys Asn Ala Ser Leu Gln Asp Gln Gly Asp Tyr
625             630             635             640

Val Cys Leu Ala Gln Asp Arg Lys Thr Lys Lys Arg His Cys Val Val
            645             650             655

Arg Gln Leu Thr Val Leu Glu Arg Val Ala Pro Thr Ile Thr Gly Asn
            660             665             670

Leu Glu Asn Gln Thr Thr Ser Ile Gly Glu Ser Ile Glu Val Ser Cys
        675             680             685

Thr Ala Ser Gly Asn Pro Pro Pro Gln Ile Met Trp Phe Lys Asp Asn
    690             695             700

Glu Thr Leu Val Glu Asp Ser Gly Ile Val Leu Lys Asp Gly Asn Arg
705             710             715             720

Asn Leu Thr Ile Arg Arg Val Arg Lys Glu Asp Glu Gly Leu Tyr Thr
            725             730             735

Cys Gln Ala Cys Ser Val Leu Gly Cys Ala Lys Val Glu Ala Phe Phe
            740             745             750

Ile Ile Glu Gly Ala Gln Glu Lys Thr Asn Leu Glu Ile Ile Ile Leu
        755             760             765

Val Gly Thr Ala Val Ile Ala Met Phe Phe Trp Leu Leu Leu Val Ile
```

```
Ile Leu Arg Thr Val Lys Arg Ala Asn Gly Gly Glu Leu Lys Thr Gly
785                 790             795                 800

Tyr Leu Ser Ile Val Met Asp Pro Asp Glu Leu Pro Leu Asp Glu His
                805             810                 815

Cys Glu Arg Leu Pro Tyr Asp Ala Ser Lys Trp Glu Phe Pro Arg Asp
            820             825             830

Arg Leu Lys Leu Gly Lys Pro Leu Gly Arg Gly Ala Phe Gly Gln Val
        835             840             845

Ile Glu Ala Asp Ala Phe Gly Ile Asp Lys Thr Ala Thr Cys Arg Thr
    850             855             860

Val Ala Val Lys Met Leu Lys Glu Gly Ala Thr His Ser Glu His Arg
865             870             875                 880

Ala Leu Met Ser Glu Leu Lys Ile Leu Ile His Ile Gly His His Leu
            885             890                 895

Asn Val Val Asn Leu Leu Gly Ala Cys Thr Lys Pro Gly Gly Pro Leu
        900             905             910

Met Val Ile Val Glu Phe Cys Lys Phe Gly Asn Leu Ser Thr Tyr Leu
        915             920             925

Arg Ser Lys Arg Asn Glu Phe Val Pro Tyr Lys Thr Lys Gly Ala Arg
    930             935             940

Phe Arg Gln Gly Lys Asp Tyr Val Gly Ala Ile Pro Val Asp Leu Lys
945             950             955                 960

Arg Arg Leu Asp Ser Ile Thr Ser Ser Gln Ser Ser Ala Ser Ser Gly
            965             970             975

Phe Val Glu Glu Lys Ser Leu Ser Asp Val Glu Glu Glu Glu Ala Pro
            980             985             990

Glu Asp Leu Tyr Lys Asp Phe Leu  Thr Leu Glu His Leu  Ile Cys Tyr
        995             1000            1005
```

```
Ser Phe Gln Val Ala Lys Gly Met Glu Phe Leu Ala Ser Arg Lys
    1010              1015              1020

Cys Ile His Arg Asp Leu Ala Ala Arg Asn Ile Leu Leu Ser Glu
    1025              1030              1035

Lys Asn Val Val Lys Ile Cys Asp Phe Gly Leu Ala Arg Asp Ile
    1040              1045              1050

Tyr Lys Asp Pro Asp Tyr Val Arg Lys Gly Asp Ala Arg Leu Pro
    1055              1060              1065

Leu Lys Trp Met Ala Pro Glu Thr Ile Phe Asp Arg Val Tyr Thr
    1070              1075              1080

Ile Gln Ser Asp Val Trp Ser Phe Gly Val Leu Leu Trp Glu Ile
    1085              1090              1095

Phe Ser Leu Gly Ala Ser Pro Tyr Pro Gly Val Lys Ile Asp Glu
    1100              1105              1110

Glu Phe Cys Arg Arg Leu Lys Glu Gly Thr Arg Met Arg Ala Pro
    1115              1120              1125

Asp Tyr Thr Thr Pro Glu Met Tyr Gln Thr Met Leu Asp Cys Trp
    1130              1135              1140

His Gly Glu Pro Ser Gln Arg Pro Thr Phe Ser Glu Leu Val Glu
    1145              1150              1155

His Leu Gly Asn Leu Leu Gln Ala Asn Ala Gln Gln Asp Gly Lys
    1160              1165              1170

Asp Tyr Ile Val Leu Pro Ile Ser Glu Thr Leu Ser Met Glu Glu
    1175              1180              1185

Asp Ser Gly Leu Ser Leu Pro Thr Ser Pro Val Ser Cys Met Glu
    1190              1195              1200

Glu Glu Glu Val Cys Asp Pro Lys Phe His Tyr Asp Asn Thr Ala
    1205              1210              1215
```

```
Gly Ile  Ser Gln Tyr Leu Gln  Asn Ser Lys Arg Lys  Ser Arg Pro
    1220             1225             1230


Val Ser  Val Lys Thr Phe Glu  Asp Ile Pro Leu Glu  Glu Pro Glu
    1235             1240             1245


Val Lys  Val Ile Pro Asp Asp  Asn Gln Thr Asp Ser  Gly Met Val
    1250             1255             1260


Leu Ala  Ser Glu Glu Leu Lys  Thr Leu Glu Asp Arg  Thr Lys Leu
    1265             1270             1275


Ser Pro  Ser Phe Gly Gly Met  Val Pro Ser Lys Ser  Arg Glu Ser
    1280             1285             1290


Val Ala  Ser Glu Gly Ser Asn  Gln Thr Ser Gly Tyr  Gln Ser Gly
    1295             1300             1305


Tyr His  Ser Asp Asp Thr Asp  Thr Thr Val Tyr Ser  Ser Glu Glu
    1310             1315             1320


Ala Glu  Leu Leu Lys Leu Ile  Glu Ile Gly Val Gln  Thr Gly Ser
    1325             1330             1335


Thr Ala  Gln Ile Leu Gln Pro  Asp Ser Gly Thr Thr  Leu Ser Ser
    1340             1345             1350


Pro Pro  Val
    1355


<210>  63
<211>  1367
<212>  PRT
<213>  Mus sp.

<400>  63

Met Glu Ser Lys Ala Leu Leu Ala Val Ala Leu Trp Phe Cys Val Glu
1               5                   10                  15


Thr Arg Ala Ala Ser Val Gly Leu Pro Gly Asp Phe Leu His Pro Pro
             20                  25                  30


Lys Leu Ser Thr Gln Lys Asp Ile Leu Thr Ile Leu Ala Asn Thr Thr
```

```
              35                    40                    45

Leu Gln Ile Thr Cys Arg Gly Gln Arg Asp Leu Asp Trp Leu Trp Pro
    50                  55                  60

Asn Ala Gln Arg Asp Ser Glu Glu Arg Val Leu Val Thr Glu Cys Gly
65                  70                  75                  80

Gly Gly Asp Ser Ile Phe Cys Lys Thr Leu Thr Ile Pro Arg Val Val
                85                  90                  95

Gly Asn Asp Thr Gly Ala Tyr Lys Cys Ser Tyr Arg Asp Val Asp Ile
            100             105             110

Ala Ser Thr Val Tyr Val Tyr Val Arg Asp Tyr Arg Ser Pro Phe Ile
        115             120             125

Ala Ser Val Ser Asp Gln His Gly Ile Val Tyr Ile Thr Glu Asn Lys
        130             135             140

Asn Lys Thr Val Val Ile Pro Cys Arg Gly Ser Ile Ser Asn Leu Asn
145                 150             155                 160

Val Ser Leu Cys Ala Arg Tyr Pro Glu Lys Arg Phe Val Pro Asp Gly
            165             170             175

Asn Arg Ile Ser Trp Asp Ser Glu Ile Gly Phe Thr Leu Pro Ser Tyr
            180             185             190

Met Ile Ser Tyr Ala Gly Met Val Phe Cys Glu Ala Lys Ile Asn Asp
            195             200             205

Glu Thr Tyr Gln Ser Ile Met Tyr Ile Val Val Val Gly Tyr Arg
    210             215             220

Ile Tyr Asp Val Ile Leu Ser Pro Pro His Glu Ile Glu Leu Ser Ala
225             230             235             240

Gly Glu Lys Leu Val Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val
            245             250             255

Gly Leu Asp Phe Thr Trp His Ser Pro Pro Ser Lys Ser His His Lys
            260             265             270
```

```
Lys Ile Val Asn Arg Asp Val Lys Pro Phe Pro Gly Thr Val Ala Lys
        275             280             285

Met Phe Leu Ser Thr Leu Thr Ile Glu Ser Val Thr Lys Ser Asp Gln
        290             295             300

Gly Glu Tyr Thr Cys Val Ala Ser Ser Gly Arg Met Ile Lys Arg Asn
305             310             315             320

Arg Thr Phe Val Arg Val His Thr Lys Pro Phe Ile Ala Phe Gly Ser
            325             330             335

Gly Met Lys Ser Leu Val Glu Ala Thr Val Gly Ser Gln Val Arg Ile
            340             345             350

Pro Val Lys Tyr Leu Ser Tyr Pro Ala Pro Asp Ile Lys Trp Tyr Arg
            355             360             365

Asn Gly Arg Pro Ile Glu Ser Asn Tyr Thr Met Ile Val Gly Asp Glu
        370             375             380

Leu Thr Ile Met Glu Val Thr Glu Arg Asp Ala Gly Asn Tyr Thr Val
385             390             395             400

Ile Leu Thr Asn Pro Ile Ser Met Glu Lys Gln Ser His Met Val Ser
            405             410             415

Leu Val Val Asn Val Pro Pro Gln Ile Gly Glu Lys Ala Leu Ile Ser
            420             425             430

Pro Met Asp Ser Tyr Gln Tyr Gly Thr Met Gln Thr Leu Thr Cys Thr
            435             440             445

Val Tyr Ala Asn Pro Pro Leu His His Ile Gln Trp Tyr Trp Gln Leu
        450             455             460

Glu Glu Ala Cys Ser Tyr Arg Pro Gly Gln Thr Ser Pro Tyr Ala Cys
465             470             475             480

Lys Glu Trp Arg His Val Glu Asp Phe Gln Gly Gly Asn Lys Ile Glu
            485             490             495
```

```
Val Thr Lys Asn Gln Tyr Ala Leu Ile Glu Gly Lys Asn Lys Thr Val
        500             505             510

Ser Thr Leu Val Ile Gln Ala Ala Asn Val Ser Ala Leu Tyr Lys Cys
        515             520             525

Glu Ala Ile Asn Lys Ala Gly Arg Gly Glu Arg Val Ile Ser Phe His
        530             535             540

Val Ile Arg Gly Pro Glu Ile Thr Val Gln Pro Ala Ala Gln Pro Thr
545             550             555             560

Glu Gln Glu Ser Val Ser Leu Leu Cys Thr Ala Asp Arg Asn Thr Phe
            565             570             575

Glu Asn Leu Thr Trp Tyr Lys Leu Gly Ser Gln Ala Thr Ser Val His
        580             585             590

Met Gly Glu Ser Leu Thr Pro Val Cys Lys Asn Leu Asp Ala Leu Trp
        595             600             605

Lys Leu Asn Gly Thr Met Phe Ser Asn Ser Thr Asn Asp Ile Leu Ile
    610             615             620

Val Ala Phe Gln Asn Ala Ser Leu Gln Asp Gln Gly Asp Tyr Val Cys
625             630             635             640

Ser Ala Gln Asp Lys Lys Thr Lys Lys Arg His Cys Leu Val Lys Gln
            645             650             655

Leu Ile Ile Leu Glu Arg Met Ala Pro Met Ile Thr Gly Asn Leu Glu
            660             665             670

Asn Gln Thr Thr Thr Ile Gly Glu Thr Ile Glu Val Thr Cys Pro Ala
        675             680             685

Ser Gly Asn Pro Thr Pro His Ile Thr Trp Phe Lys Asp Asn Glu Thr
    690             695             700

Leu Val Glu Asp Ser Gly Ile Val Leu Arg Asp Gly Asn Arg Asn Leu
705             710             715             720
```

```
Thr Ile Arg Arg Val Arg Lys Glu Asp Gly Gly Leu Tyr Thr Cys Gln
              725           730              735

Ala Cys Asn Val Leu Gly Cys Ala Arg Ala Glu Thr Leu Phe Ile Ile
              740           745              750

Glu Gly Ala Gln Glu Lys Thr Asn Leu Glu Val Ile Ile Leu Val Gly
              755           760              765

Thr Ala Val Ile Ala Met Phe Phe Trp Leu Leu Leu Val Ile Leu Val
    770               775           780

Arg Thr Val Lys Arg Ala Asn Glu Gly Glu Leu Lys Thr Gly Tyr Leu
785               790           795               800

Ser Ile Val Met Asp Pro Asp Glu Leu Pro Leu Asp Glu Arg Cys Glu
              805               810           815

Arg Leu Pro Tyr Asp Ala Ser Lys Trp Glu Phe Pro Arg Asp Arg Leu
              820           825               830

Lys Leu Gly Lys Pro Leu Gly Arg Gly Ala Phe Gly Gln Val Ile Glu
              835           840           845

Ala Asp Ala Phe Gly Ile Asp Lys Thr Ala Thr Cys Lys Thr Val Ala
    850               855           860

Val Lys Met Leu Lys Glu Gly Ala Thr His Ser Glu His Arg Ala Leu
865               870           875               880

Met Ser Glu Leu Lys Ile Leu Ile His Ile Gly His His Leu Asn Val
              885               890           895

Val Asn Leu Leu Gly Ala Cys Thr Lys Pro Gly Gly Pro Leu Met Val
              900           905               910

Ile Val Glu Phe Ser Lys Phe Gly Asn Leu Ser Thr Tyr Leu Arg Gly
              915           920           925

Lys Arg Asn Glu Phe Val Pro Tyr Lys Ser Lys Gly Ala Arg Phe Arg
    930               935           940

Gln Gly Lys Asp Tyr Val Gly Glu Leu Ser Val Asp Leu Lys Arg Arg
```

```
        945                    950                    955                    960

     Leu Asp Ser Ile Thr Ser Ser Gln Ser Ser Ala Ser Ser Gly Phe Val
                    965                    970                    975


     Glu Glu Lys Ser Leu Ser Asp Val Glu Glu Glu Glu Ala Ser Glu Glu
                    980                    985                    990


     Leu Tyr Lys Asp Phe Leu Thr Leu  Glu His Leu Ile Cys  Tyr Ser Phe
              995                    1000                   1005


     Gln Val  Ala Lys Gly Met Glu  Phe Leu Ala Ser Arg  Lys Cys Ile
         1010                    1015                   1020


     His Arg  Asp Leu Ala Ala Arg  Asn Ile Leu Leu Ser  Glu Lys Asn
         1025                    1030                   1035


     Val Val  Lys Ile Cys Asp Phe  Gly Leu Ala Arg Asp  Ile Tyr Lys
         1040                    1045                   1050


     Asp Pro  Asp Tyr Val Arg Lys  Gly Asp Ala Arg Leu  Pro Leu Lys
         1055                    1060                   1065


     Trp Met  Ala Pro Glu Thr Ile  Phe Asp Arg Val Tyr  Thr Ile Gln
         1070                    1075                   1080


     Ser Asp  Val Trp Ser Phe Gly  Val Leu Leu Trp Glu  Ile Phe Ser
         1085                    1090                   1095


     Leu Gly  Ala Ser Pro Tyr Pro  Gly Val Lys Ile Asp  Glu Glu Phe
         1100                    1105                   1110


     Cys Arg  Arg Leu Lys Glu Gly  Thr Arg Met Arg Ala  Pro Asp Tyr
         1115                    1120                   1125


     Thr Thr  Pro Glu Met Tyr Gln  Thr Met Leu Asp Cys  Trp His Glu
         1130                    1135                   1140


     Asp Pro  Asn Gln Arg Pro Ser  Phe Ser Glu Leu Val  Glu His Leu
         1145                    1150                   1155


     Gly Asn  Leu Leu Gln Ala Asn  Ala Gln Gln Asp Gly  Lys Asp Tyr
         1160                    1165                   1170
```

```
Ile Val  Leu Pro Met Ser Glu  Thr Leu Ser Met Glu  Glu Asp Ser
    1175             1180             1185


Gly Leu  Ser Leu Pro Thr Ser  Pro Val Ser Cys Met  Glu Glu Glu
    1190             1195             1200


Glu Val  Cys Asp Pro Lys Phe  His Tyr Asp Asn Thr  Ala Gly Ile
    1205             1210             1215


Ser His  Tyr Leu Gln Asn Ser  Lys Arg Lys Ser Arg  Pro Val Ser
    1220             1225             1230


Val Lys  Thr Phe Glu Asp Ile  Pro Leu Glu Glu Pro  Glu Val Lys
    1235             1240             1245


Val Ile  Pro Asp Asp Ser Gln  Thr Asp Ser Gly Met  Val Leu Ala
    1250             1255             1260


Ser Glu  Glu Leu Lys Thr Leu  Glu Asp Arg Asn Lys  Leu Ser Pro
    1265             1270             1275


Ser Phe  Gly Gly Met Met Pro  Ser Lys Ser Arg Glu  Ser Val Ala
    1280             1285             1290


Ser Glu  Gly Ser Asn Gln Thr  Ser Gly Tyr Gln Ser  Gly Tyr His
    1295             1300             1305


Ser Asp  Asp Thr Asp Thr Thr  Val Tyr Ser Ser Asp  Glu Ala Gly
    1310             1315             1320


Leu Leu  Lys Met Val Asp Ala  Ala Val His Ala Asp  Ser Gly Thr
    1325             1330             1335


Thr Leu  Gln Leu Thr Ser Cys  Leu Asn Gly Ser Gly  Pro Val Pro
    1340             1345             1350


Ala Pro  Pro Pro Thr Pro Gly  Asn His Glu Arg Gly  Ala Ala
    1355             1360             1365


<210>  64
<211>  1343
<212>  PRT
```

<213> Rattus sp.

<400> 64

Met Glu Ser Arg Ala Leu Leu Ala Val Ala Leu Trp Phe Cys Val Glu
1   5   10   15

Thr Arg Ala Ala Ser Val Gly Leu Pro Gly Asp Ser Leu His Pro Pro
            20   25   30

Lys Leu Ser Thr Gln Lys Asp Ile Leu Thr Ile Leu Ala Asn Thr Thr
            35   40   45

Leu Gln Ile Thr Cys Arg Gly Gln Arg Asp Leu Asp Trp Leu Trp Pro
        50   55   60

Asn Thr Pro Arg Asp Ser Glu Glu Arg Val Leu Val Thr Glu Cys Gly
65   70   75   80

Asp Ser Ile Phe Cys Lys Thr Leu Thr Val Pro Arg Val Val Gly Asn
                85   90   95

Asp Thr Gly Ala Tyr Lys Cys Phe Tyr Arg Asp Thr Asp Val Ser Ser
            100   105   110

Ile Val Tyr Val Tyr Val Gln Asp His Arg Ser Pro Phe Ile Ala Ser
            115   120   125

Val Ser Asp Glu His Gly Ile Val Tyr Ile Thr Glu Asn Lys Asn Lys
    130   135   140

Thr Val Val Ile Pro Cys Arg Gly Ser Ile Ser Asn Leu Asn Val Ser
145   150   155   160

Leu Cys Ala Arg Tyr Pro Glu Lys Arg Phe Val Pro Asp Gly Asn Arg
            165   170   175

Ile Ser Trp Asp Ser Glu Lys Gly Phe Thr Ile Pro Ser Tyr Met Ile
            180   185   190

Ser Tyr Ala Gly Met Val Phe Cys Glu Ala Lys Ile Asn Asp Glu Thr
        195   200   205

Tyr Gln Ser Ile Met Tyr Ile Val Leu Val Val Gly Tyr Arg Ile Tyr

Asp Val Val Leu Ser Pro Pro His Glu Ile Glu Leu Ser Ala Gly Glu
225   230   235   240

Lys Leu Val Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val Gly Leu
                245   250   255

Asp Phe Ser Trp Gln Phe Pro Ser Ser Lys His Gln His Lys Lys Ile
                260   265   270

Val Asn Arg Asp Val Lys Ser Leu Pro Gly Thr Val Ala Lys Met Phe
                275   280   285

Leu Ser Thr Leu Thr Ile Asp Ser Val Thr Lys Ser Asp Gln Gly Glu
                290   295   300

Tyr Thr Cys Thr Ala Tyr Ser Gly Leu Met Thr Lys Lys Asn Lys Thr
305   310   315   320

Phe Val Arg Val His Thr Lys Pro Phe Ile Ala Phe Gly Ser Gly Met
                325   330   335

Lys Ser Leu Val Glu Ala Thr Val Gly Ser Gln Val Arg Ile Pro Val
                340   345   350

Lys Tyr Leu Ser Tyr Pro Ala Pro Asp Ile Lys Trp Tyr Arg Asn Gly
                355   360   365

Arg Pro Ile Glu Ser Asn Tyr Thr Met Ile Val Gly Asp Glu Leu Thr
                370   375   380

Ile Met Glu Val Ser Glu Arg Asp Ala Gly Asn Tyr Thr Val Ile Leu
385   390   395   400

Thr Asn Pro Ile Ser Met Glu Lys Gln Ser His Met Val Ser Leu Val
                405   410   415

Val Asn Val Pro Pro Gln Ile Gly Glu Lys Ala Leu Ile Ser Pro Met
                420   425   430

Asp Ser Tyr Gln Tyr Gly Thr Met Gln Thr Leu Thr Cys Thr Val Tyr
                435   440   445

```
Ala Asn Pro Pro Leu His His Ile Gln Trp Tyr Trp Gln Leu Glu Glu
    450             455             460

Ala Cys Ser Tyr Arg Pro Ser Gln Thr Asn Pro Tyr Thr Cys Lys Glu
465             470             475                     480

Trp Arg His Val Lys Asp Phe Gln Gly Gly Asn Lys Ile Glu Val Thr
                485             490             495

Lys Asn Gln Tyr Ala Leu Ile Glu Gly Lys Asn Lys Thr Val Ser Thr
            500             505             510

Leu Val Ile Gln Ala Ala Tyr Val Ser Ala Leu Tyr Lys Cys Glu Ala
            515             520             525

Ile Asn Lys Ala Gly Arg Gly Glu Arg Val Ile Ser Phe His Val Ile
    530             535             540

Arg Gly Pro Glu Ile Thr Val Gln Pro Ala Thr Gln Pro Thr Glu Arg
545             550             555             560

Glu Ser Met Ser Leu Leu Cys Thr Ala Asp Arg Asn Thr Phe Glu Asn
            565             570             575

Leu Thr Trp Tyr Lys Leu Gly Ser Gln Ala Thr Ser Val His Met Gly
            580             585             590

Glu Ser Leu Thr Pro Val Cys Lys Asn Leu Asp Ala Leu Trp Lys Leu
            595             600             605

Asn Gly Thr Val Phe Ser Asn Ser Thr Asn Asp Ile Leu Ile Val Ala
    610             615             620

Phe Gln Asn Ala Ser Leu Gln Asp Gln Gly Asn Tyr Val Cys Ser Ala
625             630             635             640

Gln Asp Lys Lys Thr Lys Lys Arg His Cys Leu Val Lys Gln Leu Val
            645             650             655

Ile Leu Glu Arg Met Ala Pro Met Ile Thr Gly Asn Leu Glu Asn Gln
            660             665             670
```

```
Thr Thr Thr Ile Gly Glu Thr Ile Glu Val Val Cys Pro Thr Ser Gly
    675             680             685

Asn Pro Thr Pro Leu Ile Thr Trp Phe Lys Asp Asn Glu Thr Leu Val
    690             695             700

Glu Asp Ser Gly Ile Val Leu Lys Asp Gly Asn Arg Asn Leu Thr Ile
705             710             715             720

Arg Arg Val Arg Lys Glu Asp Gly Gly Leu Tyr Thr Cys Gln Ala Cys
            725             730             735

Asn Val Leu Gly Cys Ala Arg Ala Glu Thr Leu Phe Ile Ile Glu Gly
            740             745             750

Val Gln Glu Lys Thr Asn Leu Glu Val Ile Ile Leu Val Gly Thr Ala
        755             760             765

Val Ile Ala Met Phe Phe Trp Leu Leu Leu Val Ile Leu Val Arg Thr
    770             775             780

Val Lys Arg Ala Asn Glu Gly Glu Leu Lys Thr Gly Tyr Leu Ser Ile
785             790             795             800

Val Met Asp Pro Asp Glu Leu Pro Leu Asp Glu Arg Cys Glu Arg Leu
            805             810             815

Pro Tyr Asp Ala Ser Lys Trp Glu Phe Pro Arg Asp Arg Leu Lys Leu
            820             825             830

Gly Lys Pro Leu Gly Arg Gly Ala Phe Gly Gln Val Ile Glu Ala Asp
            835             840             845

Ala Phe Gly Ile Asp Lys Thr Ala Thr Cys Lys Thr Val Ala Val Lys
    850             855             860

Met Leu Lys Glu Gly Ala Thr His Ser Glu His Arg Ala Leu Met Ser
865             870             875             880

Glu Leu Lys Ile Leu Ile His Ile Gly His His Leu Asn Val Val Asn
            885             890             895
```

Leu Leu Gly Ala Cys Thr Lys Pro Gly Gly Pro Leu Met Val Ile Val
         900   905   910

Glu Phe Cys Lys Phe Gly Asn Leu Ser Thr Tyr Leu Arg Gly Lys Arg
         915   920   925

Asn Glu Phe Val Pro Tyr Lys Ser Lys Gly Ala Arg Phe Arg Ser Gly
         930   935   940

Lys Asp Tyr Val Gly Glu Leu Ser Val Asp Leu Lys Arg Arg Leu Asp
945   950   955   960

Ser Ile Thr Ser Ser Gln Ser Ser Ala Ser Ser Gly Phe Val Glu Glu
              965   970   975

Lys Ser Leu Ser Asp Val Glu Glu Glu Glu Ala Ser Glu Glu Leu Tyr
          980   985   990

Lys Asp Phe Leu Thr Leu Glu His Leu Ile Cys Tyr Ser Phe Gln Val
        995   1000   1005

Ala Lys Gly Met Glu Phe Leu Ala Ser Arg Lys Cys Ile His Arg
     1010   1015   1020

Asp Leu Ala Ala Arg Asn Ile Leu Leu Ser Glu Lys Asn Val Val
     1025   1030   1035

Lys Ile Cys Asp Phe Gly Leu Ala Arg Asp Ile Tyr Lys Asp Pro
     1040   1045   1050

Asp Tyr Val Arg Lys Gly Asp Pro Arg Leu Pro Leu Lys Trp Met
     1055   1060   1065

Ala Pro Glu Thr Ile Phe Asp Arg Ile Tyr Thr Ile Gln Ser Gly
     1070   1075   1080

Val Trp Ser Phe Gly Val Leu Leu Trp Glu Ile Phe Ser Leu Gly
     1085   1090   1095

Ala Ser Pro Tyr Pro Gly Val Lys Ile Asp Glu Lys Phe Cys Arg
     1100   1105   1110

Arg Leu Lys Glu Gly Thr Arg Met Arg Ala Pro Asp Tyr Thr Thr

```
                    1115                      1120                      1125


Pro Glu  Met Tyr Gln Thr Met  Leu Asp Cys Trp His  Glu Asp Pro
    1130                      1135                      1140


Asn Gln  Arg Pro Ala Phe Ser  Glu Leu Val Glu His  Leu Gly Asn
    1145                      1150                      1155


Leu Leu  Gln Ala Asn Ala Gln  Gln Asp Gly Lys Asp  Tyr Ile Val
    1160                      1165                      1170


Leu Pro  Met Ser Glu Thr Leu  Ser Met Glu Glu Asp  Ser Gly Leu
    1175                      1180                      1185


Ser Leu  Pro Thr Ser Pro Val  Ser Cys Met Glu Glu  Glu Glu Val
    1190                      1195                      1200


Cys Asp  Pro Lys Phe His Tyr  Asp Asn Thr Ala Gly  Ile Ser His
    1205                      1210                      1215


Tyr Leu  Gln Asn Ser Lys Arg  Lys Ser Arg Pro Val  Ser Val Lys
    1220                      1225                      1230


Thr Phe  Glu Asp Ile Pro Leu  Glu Glu Pro Glu Val  Lys Val Ile
    1235                      1240                      1245


Pro Asp  Asp Ser Gln Thr Asp  Ser Gly Met Val Leu  Ala Ser Glu
    1250                      1255                      1260


Glu Leu  Lys Thr Leu Glu Asp  Arg Asn Lys Leu Ser  Pro Ser Phe
    1265                      1270                      1275


Gly Gly  Met Met Pro Ser Lys  Ser Arg Glu Ser Val  Ala Ser Glu
    1280                      1285                      1290


Gly Ser  Asn Gln Thr Ser Gly  Tyr Gln Ser Gly Tyr  His Ser Asp
    1295                      1300                      1305


Asp Thr  Asp Thr Thr Val Tyr  Ser Ser Asp Glu Ala  Gly Leu Leu
    1310                      1315                      1320


Lys Leu  Val Asp Val Ala Gly  His Val Asp Ser Gly  Thr Thr Leu
    1325                      1330                      1335
```

Arg Ser Ser Pro Val
    1340

<210> 65
<211> 1348
<212> PRT
<213> Callipepla sp.

<400> 65

Met Glu Leu Gly Pro Leu Arg Val Leu Thr Val Leu Leu Cys Leu Ala
1   5   10   15

Pro Val Phe Ala Gly Leu Phe Ile Ser Met Asp Gln Pro Thr Leu Ser
            20   25   30

Ile Gln Lys Ser Val Leu Thr Ile Thr Thr Asn Asp Thr Leu Asn Ile
            35   40   45

Thr Cys Ser Gly Gln Arg Ala Val Tyr Trp Ser Trp Pro Asn Asn Gln
    50   55   60

Ser Ser Val Glu Lys Arg Leu Ala Val Thr Gly Cys Ser Glu Gly Pro
65   70   75   80

Phe Cys Lys Thr Leu Thr Leu Leu Arg Val Ile Gly Asn Asp Thr Gly
                85   90   95

Asp Tyr Arg Cys Leu Tyr Gly Asp Ser Gln Ala Ala Thr Thr Ile Tyr
            100   105   110

Val Tyr Val Gln Asp Tyr Arg Ser Pro Phe Val Thr Ser Val Gly Asp
        115   120   125

Gln Leu Gly Ile Val Tyr Ile Thr Lys Asn Lys Thr Val Val Val Pro
    130   135   140

Cys Leu Gly Thr Val Ser Asn Leu Asn Val Ser Leu His Ala Lys Tyr
145   150   155   160

Pro Glu Lys Val Phe Val Pro Asp Gly Lys Ser Ile Ser Trp Asp Asn
            165   170   175

```
Lys Lys Gly Phe Thr Ile Pro Ser His Leu Ile Asn Tyr Ala Gly Met
            180             185             190

Val Phe Cys Glu Ala Lys Ile Asp Asn Glu Ser Tyr Gln Ser Val Ile
            195             200             205

Tyr Ile Val Ala Val Val Gly Tyr Arg Ile Tyr Asp Leu Thr Met Asn
    210             215             220

Pro His Tyr Gln Val Glu Leu Ala Val Gly Glu Lys Leu Val Leu Asn
225             230             235             240

Cys Thr Val Arg Thr Glu Leu Asn Val Gly Ile Asp Phe Arg Trp Asp
            245             250             255

Tyr Pro Ser Ile Lys Glu Arg Arg Ala Thr Ile Arg Asp Leu Lys Thr
            260             265             270

Thr Ala Gly Glu Ile Lys Thr Phe Val Ser Thr Leu Thr Ile Glu Ser
            275             280             285

Val Asn Leu Ser Asp Lys Gly Arg Tyr Thr Cys Ala Ala Ser Ser Gly
    290             295             300

Arg Met Asn Met Lys Asn Ser Ser Tyr Phe Ile Ile His Glu Ser Pro
305             310             315             320

Phe Ile His Leu Glu Lys Met Glu Asn Val Glu Met Lys Leu Gly
            325             330             335

Asp Thr Val Ser Ile Pro Val Lys Phe Lys Gly Tyr Pro Pro Pro Glu
            340             345             350

Ala Lys Trp Tyr Lys Asn Gly Lys Val Ile Asn Ala Asn His Thr Val
            355             360             365

Lys Leu Gly Tyr Ala Leu Val Ile Thr Glu Ala Thr Glu Lys Asp Ala
    370             375             380

Gly Asn Tyr Thr Val Val Leu Thr Asn Pro Thr Asn Lys Met Gln Lys
385             390             395             400

Arg His Thr Phe Thr Leu Leu Val Asn Val Pro Pro Gln Ile Gly Glu
```

```
                405                      410                      415


Asn Ala Leu Met Ala Pro Val Asp Ser Tyr Lys Tyr Gly Ser Thr Gln
            420             425             430


Ala Leu Thr Cys Thr Ile Tyr Ala Val Pro Pro Pro Ala Ala Val Leu
            435             440             445


Trp Tyr Trp Gln Leu Glu Glu Glu Cys Thr Phe Ser Pro Gln Lys Val
    450             455             460


Arg Leu Gly Ala Asn Pro Tyr Ala Cys Arg Lys Trp Lys Val Ile Ser
465             470             475             480


Glu Arg Lys Gly Gly Asn Gln Val Glu Ile Lys Gln Arg Val Val Thr
            485             490             495


Ile Ala Gly Lys Thr Lys Thr Val Ser Thr Leu Val Ile Gln Ala Ala
            500             505             510


Asn Val Ser Ala Leu Tyr Arg Cys Met Ala Thr Asn Arg Ala Gly Ser
            515             520             525


Ser Glu Arg Val Ile Ser Phe His Val Thr Arg Gly Leu Glu Ile Asn
    530             535             540


Leu Gln Pro Arg Ser Gln Leu Thr Glu Lys Asp Asn Thr Ser Leu Gln
545             550             555             560


Cys Thr Ala Asp Lys Phe Thr Phe Glu Lys Leu Ser Trp Tyr Lys Leu
            565             570             575


Ser Thr His Val Ser Gln Thr Pro Phe Gly Gly Leu Pro Met Pro Val
            580             585             590


Cys Lys Asn Leu Asp Ala Leu Gln Lys Leu Asn Ala Thr Val Ser Asn
            595             600             605


Val Asn Gly Glu Asn Val Thr Leu Glu Leu Ile Leu Arg Asn Ile Ser
            610             615             620


Leu Gln Asp Gly Gly Asp Tyr Val Cys Ile Ala Gln Asp Lys Lys Ala
625             630             635             640
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Lys Thr Gln His Cys Leu Val Lys His Leu Thr Val Gln Glu Pro Leu
            645                 650                 655

His Pro Arg Leu Val Gly Asn Leu Glu Asn Gln Thr Thr Asn Ile Gly
            660                 665                 670

Glu Thr Ile Glu Val Leu Cys Thr Val Asn Gly Val Pro Pro Pro Asn
            675                 680                 685

Ile Thr Trp Phe Lys Asn Ser Glu Thr Leu Phe Glu Asp Ser Gly Ile
    690                 695                 700

Val Leu Lys Asp Gly Asn Lys Thr Leu Thr Ile Arg Arg Val Arg Lys
705                 710                 715                 720

Glu Asp Gly Gly Leu Tyr Thr Cys Leu Ala Cys Asn Ile Leu Gly Cys
                725                 730                 735

Lys Lys Ala Glu Ala Phe Phe Ser Val Gln Gly Ala Glu Glu Lys Thr
            740                 745                 750

Asn Leu Glu Leu Ile Ile Leu Val Gly Thr Ala Val Ile Ala Met Phe
            755                 760                 765

Phe Trp Leu Leu Leu Val Ile Ile Leu Arg Thr Val Lys Arg Ala Asn
    770                 775                 780

Gly Gly Asp Met Lys Thr Gly Tyr Leu Ser Ile Ile Met Asp Pro Asp
785                 790                 795                 800

Glu Val Pro Ile Asp Glu His Cys Glu Arg Leu Pro Tyr Asp Ala Ser
                805                 810                 815

Lys Trp Glu Phe Pro Arg Asp Arg Leu Lys Leu Gly Lys Pro Leu Gly
                820                 825                 830

Arg Gly Ala Phe Gly Gln Val Ile Glu Ala Asp Ala Phe Gly Ile Asp
            835                 840                 845

Lys Thr Ala Thr Cys Arg Thr Val Ala Val Lys Met Leu Lys Glu Gly
    850                 855                 860
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Ala Thr His Ser Glu His Arg Ala Leu Met Ser Glu Leu Lys Ile Leu
865             870             875             880

Ile His Ile Gly His His Leu Asn Val Val Asn Leu Leu Gly Ala Cys
            885             890             895

Thr Lys Pro Gly Gly Pro Leu Met Val Ile Val Glu Tyr Cys Lys Phe
            900             905             910

Gly Asn Leu Ser Ala Tyr Leu Arg Ser Lys Arg Ser Glu Phe Ile Pro
        915             920             925

Tyr Lys Met Lys Ser Ala Arg Phe Arg Gln Gly Lys Glu Asn Tyr Thr
    930             935             940

Gly Asp Ile Ser Thr Asp Leu Lys Gln Arg Leu Asp Ser Ile Thr Ser
945             950             955             960

Ser Gln Ser Ser Thr Ser Ser Gly Phe Val Glu Glu Arg Ser Leu Ser
            965             970             975

Asp Val Glu Glu Glu Asp Ala Gly Ser Glu Asp Leu Cys Lys Asn Pro
        980             985             990

Leu Thr Met Glu Asp Leu Ile Cys  Tyr Ser Phe Gln Val  Ala Arg Gly
        995             1000            1005

Met Glu  Phe Leu Ala Ser Arg  Lys Cys Ile His Arg  Asp Leu Ala
    1010            1015            1020

Ala Arg  Asn Ile Leu Leu Ser  Asp Asn Asn Val Val  Lys Ile Cys
    1025            1030            1035

Asp Phe  Gly Leu Ala Arg Asp  Ile Tyr Lys Asp Pro  Asp Tyr Val
    1040            1045            1050

Arg Lys  Gly Asp Ala Arg Leu  Pro Leu Lys Trp Met  Ala Pro Glu
    1055            1060            1065

Thr Ile  Phe Asp Arg Val Tyr  Thr Ile Gln Ser Asp  Val Trp Ser
    1070            1075            1080
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Phe Gly  Val Leu Leu Trp Glu  Ile Phe Ser Leu Gly  Ala Ser Pro
    1085             1090             1095

Tyr Pro  Gly Val Lys Ile Asp  Glu Glu Phe Cys Arg  Arg Leu Lys
    1100             1105             1110

Glu Gly  Thr Arg Met Arg Ala  Pro Asp Tyr Thr Thr  Pro Glu Met
    1115             1120             1125

Tyr Gln  Thr Met Leu Asp Cys  Trp His Gly Asp Pro  Lys Gln Arg
    1130             1135             1140

Pro Thr  Phe Ser Glu Leu Val  Glu His Leu Gly Asn  Leu Leu Gln
    1145             1150             1155

Ala Asn  Val Arg Gln Asp Gly  Lys Asp Tyr Val Val  Leu Pro Leu
    1160             1165             1170

Ser Val  Ser Leu Asn Met Glu  Glu Asp Ser Gly Leu  Ser Leu Pro
    1175             1180             1185

Thr Ser  Pro Ala Ser Cys Lys  Glu Glu Glu Glu Val  Cys Asp Pro
    1190             1195             1200

Lys Phe  His Tyr Asp Asn Thr  Ala Gly Ile Ser Gln  Tyr Arg Gln
    1205             1210             1215

Gly Ser  Lys Arg Lys Ser Arg  Pro Val Ser Val Lys  Thr Phe Glu
    1220             1225             1230

Asp Ile  Pro Leu Val Thr Thr  Val Lys Val Val Gln  Glu Glu Asn
    1235             1240             1245

Gln Thr  Asp Ser Gly Met Val  Leu Ala Ser Glu Glu  Leu Lys Thr
    1250             1255             1260

Leu Glu  Glu Gln Asp Lys Gln  Val Lys Ile Pro Phe  Ser Thr Leu
    1265             1270             1275

Ala Pro  Ser Lys Ser Asn Glu  Ser Val Met Ser Glu  Ala Ser Asn
    1280             1285             1290

Gln Thr  Ser Gly Tyr Gln Ser  Gly Tyr His Ser Asp  Asp Met Asp
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        1295                    1300                    1305

Asn Met  Val Cys Ser Ser Glu  Asp Thr Glu Leu Leu  Cys Ala Gln
    1310                    1315                    1320


Glu Ala  Ser Pro Thr Leu Pro  Arg Cys Ala Trp Pro  Gly Ile Tyr
    1325                    1330                    1335


Ser Pro  Ala Pro Val Ala Ser  Leu Pro Leu
    1340                    1345
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